Letter experimental job experience: theoretical practical n diploma, employees learner n diplomat ,basic advance filing ,posted minim cadet junior senior principle trademarks

-**1. requirement:**
.letter experimental work based log activities theoretical practical school institutes employees learner , orientation practical school disciplinary didactic work based,

-1.1 explanation assessment
:trade claim inventory low
Triggered: gitlab,/ GitHub /azure

Issue test ..
-Triggered electronic elektor technologies
-Circuit microcontroller ,,
-Gitlab ,fail running
Issue kananga ,, Engineering tshingombe
Project ,committed contributing ,code source
...

36..Explanation: gitlab ,GitHub azure data ,work Running
-projects , pinned , issues,merge , request, contributors analytic ,
- repository analyse:
Manage,plan ,code , building, secure, deployed, operate , monitoring.
- measured in byte code exclude generated .
- percentage ,
,- coverage static for main mars 26-jun 24.. September
Bi Weet code covered.
Commit statict for main may 09-june 24.-august
-total 4 commit , average per day , authoritie.
Drag up date kananga5 .. overview commit pipeline., assignment, review milestone,time participate:

Issues...
Project code source ,
Marketing

Azure :,work item ,epic printed
Pipe line , ,test pipe
-measure in byte: project existing
Engineering tshingombe

_____
-github : tshingombe
Issue contribution,
Repository: run project code data source
Pipeline:
Repository:
-Dhet St peace college running projection:
Contribution GitHub collectivity;
__---
-**38. pratical school: instituts research and development learner lecture vocational**
- isita project back log dhet and DBE umalusi : pratical school trade experiemental workbased
Teaching learning student assessor , student educator technical trade student trainer training student learner facilitator technical ,student : engineering businesses study,
Isita project subject engineering electrical : national examination learner topics examin:
Time table examination ,n3to n6 orientation industrial , plant operations, electrotechnology ,electric trade theory conduct assessment

- project isita project total grand : experiemental theoretical and practical,engineering ,orientation industrial trade theory ,orientation industrial plant operations, orientation industrial electrotechnology
-Project low examin rules ,in dhet in high school orientation assessment teaching workplace workshop technologie electrical , technologie construction,technologie ,grade 1to grade 12 technologie, Educational technologie circulum,grade 1,6teach pratical skill trade ,,9-12 teaching orientation technologie electrotechnology, organisation supervisor planing manager supervisor Phase circulum,module conductor, insulation,matter ,AC ,DC current ,AC machine ,DC machine instrument, transmission rectified
-Teaching orientation industrial class: grade period basic workshop
Orientation .
-workplace experiemental relate: explanation , isita in dhet in DBE teaching workshop work class engineering vocational career Guidence

-Framework work qualification saqa:
Undertake material engineering ,
Teaching qualify n3subject isita project
Council trade, orientation industrial trade occupation trade isita workplace

manufacture city power power: technology trade electrotechnology letter topics CVS ,, in DBE teaching technical DBE orientation industrial Eskom ..city power
-organisation supervisor duty Eskom city
Power
Under printed learner assessment self assessment peer in dhet project.
,in dbe teaching grade circulum, orientation industrial
Eskom expo science : teaching teach grade electrotechnology orientation, electrotech industrial ,social project computer
Back log project skill fund ..
,- orientation industrial CDs ..close tendered
-lesson social worker practice
Marksheet student orientation industrial time table ,student organisations planing supervisor time table , student educare time time table , student Education,student Engineering studies time table, : student policing traffic , business, pratical office school student marksheet workplace experiemental learner close bid : close material trade theories in dhet in DBE isita ..umalusi

- DBE subject workshop grade to working CVS circulum study in trading isita

_____
- teaching and lecture Irregularite
Pratical
material candidate processing learn
Regulation back log after
Assessment center
-non attandance subject appear letter application letter workplace in dhet conduct learner project in dhet Afric instituts training shalom traing ,out mark term
Non attandance: subject non registered
Irregularite material: subject engineering science , mathematics,electrotechnical , industrial electronicien dhet in DBE ,ucpd
Record academic years .
-Total subject ,to back log project
Management system information learn , policy in DBE trade theory subject registration second additional subject
Rwiten subject : extra circular in dhet in DBE pratical regulation .
- practice police , orientation life teaching , literature mathematics ncv teach vocational guidance in DBE level 4 certificate pratical skilled panel control wiring electrical DBE workshop development: teaching workplace to trade in DBE panel ,,teach ucpd irregularity project back log printed

...

Introduction technologie,workshop electrotechnology , electrotechnic, electromechanical manufacture process

1.3purpose:
-planta d shop layout ,
-insustrial safety ,
-ferrous materials ,
-non ferrous materials.
-meeting furnaces
-properties and testing of metals
-heat treatment carpentery .
-patter. and core making
-foundry tools and equipment
-mold and core making .
-casting
-forgi g .
-hot working of metals .
- cold working ,
Sheet metal work,lathe machine drilling plane and sloping
-powder metalling .
- inspection quality
2.explanation :Manufacturing Engineering: process planing ,
Claim
2.1 process planing , 2 process sheets,
3 route sheet ,tooling , 5 cutting tools machine tools , traditional,numerical jogs and fixture ,7 jigs and mould ,manufacturing information generation , CNC port program ,10 robor programmers ,11 flexible manufacturing systems ,FM's group , integrated manufacturing cm.

-**3. Explanation:Production process : process planing. Manufacture process , classification of manufacture row** ,
-primary shopping process size casting melting .
-secondary machining process job understanding operational hot working processing forging rolling hot sprinning extrusion hot drawing.
4.explanation cold working process :
Cold forging cold rolling heading cold drawing wire stretch forming ,sheet metal working Piercy punching lancing notche. ,coming sequence ,deep drawing.
-5.explanatiin join process: reffiling assembly, welding platisc or fusion ,
-soldering reverting screwing welding plastic,press fitting sinter , bonding shrinking fitting ,explosive welding diffusion welding key and cotter ,coupling and nut and bolt joint .
- surface finishing process.
-6 explanation:honing lPpi g supper finishing belt grinding, polishing tumbling spraying ,pouring inorganic coatic analizing ,sherodizing parkerzi g galvanizing plastic ,metallic .
-7 product simplification and standardization: policy a counting procedure personal policies performance evaluation control of expenditure safety aspect security procedure regulation,design manufacture material and part supplies ,methods of testing drafting method abbreviations

-inspection and quality control ,size shape other dimensions involved measure.
-mechanization and autonomy
Control device increased productivity reduced cost of labour and dependence on labour short improve quality reduce in process inventory reduce dependence on operator in tease safety reduce risk humans fixed automation programmables automation flexible automation .
-fixed automation cam .
-Product system , manufacturing system .
Detailed design prototype development test simulation design manufacture.
- computer manufactt..-
- factory level production management planing , production management material Requirements planing .
- bill of materials capacity planning , inventory
- CIM technologt compl networks system design and analysis distribution process , modelling and simulation expert system quality engineering.
- CAD :soliD modelling variation computer .

-meeits of a good plant layout , reduce machine how workflow process inventory is , manufacture time relatively less floor area is required , material handling is less.
- explain types of layout ,fixed or position
-men tools component yes , workplace yes ,finished product to store

-explanation
S.No| line or product layout | process or function
Industrial safety ,safety precautions while working different hand tools .
Approved : screw drives wrenches ,hammers files chisel,saw tap

-engi seeing material yes = metallic material yes or no. Metallic yes ,
Metal yes ,feroos or non ferouse , steel plain carbon ,allot ,
Cast ion grey while react metalloid ductile,
- non ferrous , aluminium copperwood papperleather ,mineral cement class graphic,
-
-iron ore heanotite Fe304 colore red ,iron 70%,
-magneite (Fe203, colore blanc 72%
-lemo ite ,colore brown. 62%
siderite ,brow,48%

_____
_-explanation market forms of steel structure shapes : laball

_free cutting ,c=0,13max,MN=0,7-0,12,,S=0.16
-steel quality ,carbon tools steel Anees ,plain carbons ,

- Properties: application % tensile strength kg/mm.sq

-Typical blast furnace:

-Blow yes ,yes stove yes ,blast furnace yes ,slag ,oxygen yes ,mixer ,
.-basic oxygen produce yes carbon yes Stell ,bessirer convert bessure ,,
Basic open heart basic operation , acide open heart ,, electric furnace yes acid , pudding process wraug iron , acide crucible ,steel ,iron ,mealable ,steel , ,

_____
Tools

Plastic plaster ,5wax
- factor effecting selection of pattern material,
-number of casting to produce metal pattern are prefu required large in number ,type of mould process methods ,of molding hand or machine ,6 degree of dimensions accuracy surface finishing requirements minimum thickness requirements shapes complexity piece cost of pattern chances repeat order .

-types ofpatter :
-properties of moulding sand refactoring permeable cohesive green ,found sound casting test moisture content test clay chemical composition of sonde ground shape and surface texture of sound grand size distribution sans specific water absorption capacity permeability shatter index

---_____
Explanation: welding process ozyfuel gaz ,air acetylene welding oxyacet, oxyaceten ,oxy - hydrogen welding pressure ,

-arc welding process car on arc welding ,sheelded metal arc ,welding , submerged arc welding ,gas tungsten arc welding , resistance welding ,solids state ,welding process theemique radiant energy welding

-explanation: claim low
machine used in sheet metal shearing machine,bending machine, grooving machines peini g machine ,beading machine ,swaging , machine ,blurring machine,double seaming machine.
-types of press
-method of operations an born press .methods of power source Manuel press mechanical power hydraulic press ,
-fitting : explain introduction device equipment tools marking tools , measure device measure instruments, supporting tools holding tools striking tools , cutting tools ,tightening tools ..

-explain : inspection and quality control: checking components or product with requirements specification ,tolere Ce on port , interchangeable dimensions.
Size numerical value lengthimjte size :
.-uppee deviations algebraic difference between the two maximum limited of any size ,low deviations,mean fundamental deviations ,tolerance
-fits allowance fit difference hole size and shaft size allowance.
Fits yes clearence fit yes sliding fit yes or running fit yes ,,,
Interference fit yes or forcefit yes or strink yes press fit ..
-control chart : used quality industrial yes maintenance yes continuous yes evaluation yes , manufacture yes,
-statistical control yes ,device cast yes ,
-surface finish yes ,routines primary yes ,waviness profile ,lay,flow
-----

4.1requirement installation electrical guide ,, scheneider electric

-explanation : characteristics of particular source and load .

- photovoltaic installation ,
-residential premise and other special location .
-WMC guidelines measure.
-General rules of electrical installation statutory regulation ,0V to 1000V ,AC ,,0V to 1500, ln public network , compliance with national regulation ,IEC 603643,
-installes power load : characteristics values of cos .
I=IA.cos$/cos$.. power factor before compensation and cos alpha factor after compensation being the original.
- heating factor of 0,8 recommender number consumer ,5 story's apartment building with 25 consumer ,each having 6 kva installed .
- the total installed load the building is 36+24+30+36+24=150kva,
-thw apparent power supply required for building ,150×0,46=69Kv,
- magnitude of current in different sections of the main feeder supplying vertical rising ground ,level cross section area conventionally spece , 3 floor current entering the rising main at ground level ,
- 159×0,46×1000÷400×√3=100A
-(36+24)×0,63×1000÷400×√3=55A.
-Possibivilty of improving power factor ,extension to the installation installation constraint.
-In=Pa×1000÷U×√3,
Pa=KVa ,rating the transformer.
I=phase -to phase voltage at no load in volts (237V or 410V) in ampers ,
In =Pa×1000÷V=,
V= voltage between LV terminal,
Simplified equation for 400v(3phaae load ,) In = kva×1,4 (IEC 60000 power ,
-explain choice and use MV equipment ,MV / Lv transfo for use of MV , equipment choice of MV /LV ventit in MV substation,
- substation including generator and parallel operator of transformer.
Generator alone operation not working in parallel with the supply network.
Generator in parallel utility supply parallel operation of transformer ,
- type and constitution MV/diatrt,
-differenr type of substation,indoor substation ,outdoor substation.

I'd=Uo÷ZS,,0,8.Uo÷ZC..
I'd=fault current ,
Uo=nomminal phase .
ZS=earth fault current ,
ZC=fault .

_____.

5.Scotland qualifications
Explanation

-basic software engineering concept to solving electrical and electronics engineering problem.
-writing and testing and documenting I/O.
- Program using the basic structure
-deaign using flow charts or program design language.
-Write test and documents linear programming using I/O statement.
- Write test and documents I/O Programmation incorporating subroutines .
-table Boolean expression for logic gate knowledge skil .
-hexadecimal number system.
-conversion , between hexadecimal and binary gate symbols.
-teith table associated Boolean,and /or/not ,exor/and and nor .
-combibation logic , expression in sum of products.produxt minimise logic ,draw minimised digital,
-sequencw logic .
-bloc diagram of sequential machine need for memory in sequential machine need memory in sequential logic latch ,JJ and D bistable elements.
-asynchronous and synchronisation operation counter and shift register circuit using bistable .
-lofic family device characteristics.
Circuit .

Build and test counter and shift register circuit
- evidence requirements should

-single line schematic for 33/11kv substation,
-liar standard fault level for local
Sister voltage (250MVA at 11KV ,100MVA at 33 KV,
-pee unit calcul : concept of infinite busbar by grid system working with ,3phaae short circuit by grid system working with 3 phase short circuit worst case scenario calculate fault level for a fault on an ,11kv feeder fault level , fault 11kv feeder from a busbar it is expected that the circuit used will smillar to infinite system feeding 33 KV line with inductive reactance and transform per line excepted one generator should be

connected to the ,11kv ,,
.S1=250MVA,,U1=11kv,,Z=√R.R.+z(w)..
V÷I=11÷39,3=0,279,,ohm ,,,
=100÷5,24=19,083 ohm ..
S,=V.I.√3..
I2=250÷11×3=22,72KA,,,,39,3KA
I1=100÷33×√3=3,039==5,24KA..

-explain next generation higher national electrical engineering : utilisation electrical power transmission lines and complex waves,
-Porformence calculation to determine each Zo ,V ,B ..
- Voltage current and power for one fill ZL>Zo,,,ZL<Zo
-calculating phasor complex waves calculating electrical quantitie R-L-C..
-computung in engineering programmablw system unit ,micro controller system or a standard personal computer with access I/o

- the requirements earth fault loop impedance Zs ,in relation to the electric shock constraint of a circuit [ZS=Zo+(R1+R2)]

-develoment speedload and torque load graphs for basic motor types using DC ,,
E=V-Ia.R,,,,,E=K1.N.flux ,,,

6.Engineering mathematics
,course code ,
Valise.

-knowledge and procedure function bit
-input port switch analogy output ,port motor led , digital analigi converter platform personal computer development personal computer development micro control ,
- explain software system partitioning into manageable task structure chart input ,process ,output modulator programming step wise detail design lineare creating and saving file compiling and debugging source code syntax error executinf the compiler code ,
- executing the compile code .run
- repeat
Action to be performed until a condition holds .
- while conduction to be tested Di action to be .
-ens while
- write test and do ument I/O prog using conditional selection>>
-ID conditions then action ifco dition gold's .
-ID conditions then action if condition holds
-else
Action if condition does hold.
-End if
Case condition of
Case 1:action for case 1
Case 2:action 3 for case2
Case n : action for case 2 n
End case
Condition based input portion use of build process such
- write .
-test condition documents
I/O prog using iterative loop statement.
-repetition
For variable ,from start to finish in steps of value .
Do.
-sections to be repeatlt perform
End for .
-fundamental of control system and transducer .
-high level Engineering software.
-soffward engineering process creating file editing files process constant and variable.
-operatoe and
-statement :input output documents.
- evidence requirements , satisfactory write one linear prog.
- input and output statement different type of variables arithmetic operator .
- knowledge skill test and documents.
Relation operator =,|=>logical operators
-vooleen express.
-branxh statement
,if then if ,. Then,,else,,case,,of,,port configuration readings.

-outcome 3 :
Flowchart pseudo code : for ,do,repeat, until,while,loop.
-statement:for do repeat , until while .
-looo to manipulable data array
-out put array , data array read port data into .
-testing of iterative loops ,test plan and actual .
- if then ,else

If of either while do or repeat until for next

to

- Advanced unit specifications: engineering mathematics 1,
qualifications Scotland,level6
-outcome outcome provide evidence following skills skill time .
-solved 2 problem on degree radian .
-A.sin(nx+-a)=, or ACOs (nx+a)=b
-blow , logarithmic
 -log+logy=logx.y
---logx-logy=logx÷y
p.logx =logxP.
y=A×lnx
y=A×log x..base10
Convert rad =Teta ÷180×π
- A×sin(nx+a)=+-B
- A ×cos (nx+alpha=+-B
-y=a.expx

- explain ,,x =log .base a inverrse function .y =a.exp x
y=10 .exp x
y=e.exo x ,,x = log .
y=e.expx and ..x.exo =log..e y

- solve exponential (5 .exp , = 95 ,,,x exo 3.5 =0,1..
log .base 10 (x+2)+log .base (x+4)=0,5
..
-Apply mathematics technique to vector and complex numbers ,2 d
d=√(x2-x1)(x2-x1)+(y2-y1)(y2-y1)

-D:,,d=√(x2-x1)(x2-x1)(x2-x1)+(y2-y1)(y2-y2)(y1-y2)+(z1-z1)

-scalar ,,ab = b.a ,,,a(b+c)=a.b+AC

-b.b-4a.c<

- cos(x+B)
Sin.a ×sina+cos.cos alpha =1
-sin2a=2sin alpha.xos alpha
-cos 2 alpha = cos .cos alpha -sin

- driver , differential , hyperbolic

a.x exo (ax+b).exo n ,,,ln (ax+b),,,e..expon (ax+b)
-sin (180 degree +Teta) = sin .Teta
Sin Teta + cos = 1 , sin 2 a alpha
1-2 sin .sin a ,,,cos 2 a ,alpha = cos .cos a - sin 2.alph

-_____
Hyperbolic identify
e.exox = cos hx + sin .h.z
e. - x = cos h x - sin h x
Cos h.x 2x-sin x =1..
- sin h (x+-y) = sin hx .cos by +- coshx sin y
-cish (x+-y)=cosh.z coshy+- sin h x sin h.y
-sin 2x = 2sin h.x .cos hx

-cish 2x = cosh.x+ sin h .sinh x.

_____
Integral .u (dv/dx).dx=uv-.. integral.v(du/dx).dx

Equation:
Integral .x.x.e.e. dx

Integral 3 limited ,x dx ..
Integral ..b..a √1+(Dy)(Dy)÷dx()...dx

_____
Introducing ,j in term ...j.j =-1,,j=√-1
Introduction Euler relation
e..exo j Teta = cos .Teta+j.sin Teta ..and Z=r(cos.teta -jsin.teta) r .e.-j.teta
For ,-10,(-2+j5),(1-j)(1+3j)..that Z1 ,Z1=6,e .j π/6,,and z2=9e..-jπ/3..
-Det,Z1.Z2..and Z1/Z2..
-introduced moivre theorem (cos .Teta +j sin Teta) .n = cos Teta..Z.exo = r ..
-solved involve express (√2+j)5....
-solved ,Z.....
---_____
-diffentiatiin technic to solve engineering problem.
a.x .exo ,(ax+b).exo..n

-dy/dx=Dy/du,xdu/dx

-apply chain module to function..
(3.x.exp4+7).exo,,sin(t.t.t+1),,5

_____
Use differentiation technique to solve .
y(x)=u(x).v(x)...state product quotation..
Dy/dx=V×du/dx+u.dv/dx..or y'=v.u'+uv'

y(x)=u.(x)÷v(x)

-dy÷dx=v×du/dx-u×dv/dx÷v.v..
-Vu'-uv'/v.c

-solved ..x.x,,sin
(4x+9).e.-3x,, t.t-1/t.t+1,,..

Solve differential
x.x+3(y)(y)+4x-5y=, linear factor quadrature improper.
.-solved infinite integration ..
Integration.(5x+2).exp6 dx,,
Integral (x)√1-x.z..dx..

-solved second order constant linear differential.
a×d.d.y/d.x.x+Dy/dx+cy=f(x)..
Use partial differential

f(x,y)...z=f(x,y)

, explain that double integration involve integration,f(x,y)

Integration.integration .r..f(x,y)dy.dx..

Region integration x-y,,

-solved differential equations Laplace transform introduction la place
transfo ,f(t)
F(s)=integration ,e St ..f(t)DT..

,,ergent value vector solve linear ,
|[A-lambda],, matrices ,,,x of eq Ax =lambda x..
-problem manipulation of matrices ,sq, identified transpose argument..

- solve problem use of Serie representative Taylor Serie .
f(x)=f(xo)+(x-xo)f'(xo)+(x-xo)exp2,f'(xo)/2+(x-xo)exp n,f(n).(Xo)/n|

introduce mac Laurence .
f(x)=f(0)+xf'(0)+x.x.f''(0)/2|+...(x.n.f(n).0/n..

,eg ..e.x ln (1+x),,,e.x tanx..

Deviations a linear approximation,polynoy..

-solved first differential equations..
Dy/dx=f(x)g(y)..
-y=Vx,,or y=ax+by+c

Dy/dx+P!x).y=q(x)..

-voltage flow
A 1=RF/R1,,Av2=RF/R2,,AVN = Rd..
Vo=(Av1.V1)+(Av2.v2)+...
Vo=RF(V1/R1+V2/R2+....

Amplifier

AV=Vo/(V2-V1),,AV=RF/R1,,Vo=RF/RI(V2-V1)

--id V1<ref then Vo satire positive,
.AV=Vo/V1,,,AC=1+RF/R1,,
Vo=(1+RF/R1)..

-typical amplifier circuit
Vo=out voltage
RF=feedback reinst
Vi= input voltage
Ri= input resistance
VCC= supply voltat ,AV ,supply voltage

, explanation ,bit polar transistor story ,hfe = IC / io
MOSFET transconductance ,,,JM= Aid /A.vg

ID=vDD/RDs,,.V=IR
Et=R1+R2+R3
1/Et=1/R1+1/R2+1/R3
Et=R1.R2/R1+R2....
V1/V2=R1/R2....
V1=V1.R1/R2...

Electrical energy ,EC= V.t..

Work done ,Ew=F.×d,,
Power ,,O=E/t
Electrical power ,P= V.T ,= V.V/E=>...I..

_____
6**.Engineering science.**
Structure :
Stress =£=F/A,,,,strain €=ΔL/L
Young module ,E=¢/€,,
Factor of safety = ultimate load / safety working load..

----------:
Pneumatic: pressure force area ,P=F/A,,area
circle ,A=π.r.r ,,,A=π.d.d/4,,=. π=3,14,,

-mecanisme :
Velocity rotation,
VR=spped of input /speed of output,,
Torque ,T=F.r

Circular of circle ,C=π.d
Moment of force ,M=f×l
Prince moment ,sum =0,, condition..

-7. explanation engineering science
Explanation:
:variable temperature soldering iron is shown the soldering iron use a two state control system to turn heating element on and off,and to monitor it output to maintain the desired temperature.
- completed the control diagram for the soldering.
-desited temperature>>>, control unite ,>>, temperature sensor,>>>soldering iron temperature,

-viewi g platform..

-explanation: A beam used in the construction of the viewing platform.
Calculate the magnitude of the reaction at B , calculate magnitude and direction of the reaction,
- calculate the magnitude of reaction at B ,,
Labalked ,
(24000×1.10m)-(3500×0,30)
(F1×L)+(F2×L2)=
264000+10500=35000×L
265050÷35000=75,70m/n

8.Explanation: A lifting system to allow worker on construction to carry out essential maintenance is being .
A warning system that will ,sound an alarm when the platform in motion is two button used to control the upward and downward motion ..

-input /output. | Operation
-alarm sound | A=0
-Maximum load. | B=1
-bouton c
Pressed,

Bouton depressed| C=1,,,D=1..
.-propose design has the following specifications condition must be met the alarm z ,will not sound unless the gate (A) is closed will not sound when weight on platform will sound when either button ,c or complete the Boolean equation for the alarm ..

Explanation: calculate a suitable value for RF:

Vi=RF/R1(V2-V1),,,
Vin =(Vin+Vin+Vin,

O,31+0,53+0,47=1,32
RT=1/33000+1/3099+1/30000=o,ooooo90960
RF=,,RF=Vo×R1/V2-V1=,
1,2×0,09999096/1,32=0,0099910

Explanation mechanical engineering must design a pneumatic circuit meet the flow,when push button VA and VB not pressed ,or when. Not pressed lever ,VC state double acting cycling must, outstrok
{A`.B.`+C
-a short time after cylinder outstrok must instroke automatically an initial design the circuit...

The program to control the cylinder must follow criteria oustroke =A`.B`+C the cylinder must remain oustroke 15000 milrsecond ,209 milrsecond after the command to instroke the system start monitoring.

Explanation
-An alternative motor with moseft driver in also consider the mosef has a resistance of 2,3ohm fully Saturated and the motor is rated as 0,49 w at 6.0

I=0,40÷6,0=0,07
I=V/R=6,9/2,6=2,60,,
E=V-IR
6-0,182=5,818V

As part of the car control window are to be open and automatically the following control produced ,by

- explain with ref to the circuit above the impact switching out 7 high then output 6 high then output 6 high has on the motor

---

Program below in Pbasic ardwno code is know to have fault..
- main if pin 3=I then jump
If pin 2=I then main
If pin 1=0then man
Jump:high 7
Pause 15000
High 6
Pause200
Low6
Goto jump
-void loop (){if digital read (3)== high {jump();}
else if (digital read 2,
==High){loop ();}
else if (digital read

(1)==Low){
loop();}
Void jump (){
Digital write (7,H,G,
Delay (15000)
Digital write (6,high delay (2000); digital write}
-

The camera is placed on the outside car and a talk of clear plastic is place ...

Ligth sensor is used to identify when the plastic is dirty when it sense a value of less than 219 lux a motor spins to move clean plastic In front of the camera the control ,
- calculate the value of aR1 required to saturated the op - Amp positive 219 lux ,
R1=Rcc-R ,,,Vo=(1+RF/R1).v

-motir requirements ,55mA of current ti operate the op - amp saturated to 78% of the supply voltage vbe is ,0,70V saturated transistor
RF =,,,explan 9,0055A÷0,70÷0,000795÷6÷9,,

R1=Rf÷vo÷v2-v1,   = 0,01119...

Truck ligth system ,completed logic

A,B,C,D,E,F,

---+
Batteries power portable flood light are to be installed the construction site to allow work to be completed in lower ligth ,the battery is rated at 15V,13A,kB hour useful energy is 2,32 MJ
Completed the energy audit diagram for the portable floodlight batteries slowing the input and output energy ..

The diagram below show part of the design for the framework that supports the floodlight.
.-calculating using nodal analysis at node A,and B the natural force in ,AB,AE,BD,and BC

Member | magnitude. | Natural
AB. |. |tie
AE. |. | Strut
BD. |
BC

. explanation= L=355×cos 30=321,73nm
AE=455×sin39=227,5Nm
BE=455×cos 30=227,5
DA=(455×30 sin ×30 sin)+(350,sin 39
=321,73+227,=549,29

The force w represent the weight exhibition and is acting ,1,4 m from point B ,the distance from A to B is 3,46m
Draw a free body diagram of the force acting on the exhibition calculate the force ,
650×sin 120°
776×sub 120°
-force acting on the connecting ring
Q=(530×cos65°)=223,97
P=650×cos 37°=447,2
T=776×cos48=539,054
F1+f2+f3=

---
d) replacement exhibition is to suspend from ceiling some positions two cable support the new exhibit hanging from the connecting ring are replaced Hallow aluminium..
The 2.7 long tube has a diameter of 72 mm an walk thickness ,,2,5 mm it support a load of 32,7 N calcul the charge in length tube it is load new exhibith .

A= π.d.d÷4= 3,14×72÷4...
€°2,6-2,5÷2,7=1,92..
£=F/A=32,7÷56,62=0,62..

Engineering civil compact , calcul the total torque produce by motor ,

- described an advantage : described the purpose of.

-funal design structure used to support the weight the boring .
Completed using nodal analyse table of the missing force their nature of the missing force their nature .

Member .| AB | AC| BC| BD| CD
Force |. |. | 583kn|566kn|

Nature | tie | strut | strut |

AB=(550×61)+(550×61(

---++---
Calcul the force that player strikes the ball product a torque of 295 NM
(0,34×295)+(0,84×295)
Force extension graph ropes

Calcul the strain energy in the rope when it experience tensile tension 159 ..

---__----_
An electronic engineering design digital logic circuit for Boolean equation ,
Z=(A`.B`)+(C.D)
- draw the digital circuit for the ..

Design for an operation amplitude op circuit is

Calcul gain for circuit when V input voltage is ,9,11V ,,ΔV=7,59÷0,11=69..
Determine appropriate resistor value for E 1,and RF : AV - R1/E1=59-1/R..

Integrator
§vout =1/RC.integrator .Vin St ...

f=1/2πRc..

555,timer stable ..

Marj = T1=0,7(R1+R2)
T2=9,7 R2.c
Freq° 1.44/R1+2R2c..

Calculate t output voltage of the difference amplifier amplifier when the ligth ,calculate the minimum output voltage requirements from Amol to cause three ,

d) described effect adjusting variable resistor will have light level ..
- the LEDs ,are at their most offence when current of 52 mA ,flow each they also found 2,3 y occurrence ,
Calculate the required resistance for protection resistor ensure maximum efficiency ,VCC for the comparator is set to 8.0 v the comparator saturate at 75%
.I'd = 52 mA ,,vs = 23v ,,,
ID,= 9,0952÷8=0,93,,
23/0,04=575 ohm

Future solution involving used of microcontroller is also tested an output pin on the microcontroller activate bank of LEDs ..

From sensor input ,microcontrol yes ,,pin 6 ,,

1/R1-RD)+(1/R2+rd2)+(1/R3+Rd3)+(1/R4+Rd4..

Explain with ref ,to code circut the effect on the LEDs ,when the reading from the analogue sensor rises from,5 to 200

The logic circuit show below control valve that provides water for the plants ..

Explanation pneumatic circuit need to feed wast into incidence part of a system to produce electricity safety reasons ,be bar material is pushed in the system cylinder outstrokes allows .
. càlcul the minimum base current in requirements to switch on the relay ,,,,

In =0,7/1,5=0,4667A..

.- calculate the voltage requirements across the resistor assuming vbe is ,07 v ,,calculate the current through the variable resistor ,
V=6.0.1,5/2,5

- by using pulse width modulation the LEDs can be mode appear bright or dim
Code for the test is below in Pbasic and ardruuno

```
Main:                 into sensor =A9
redax Pino,Bo.    Int led bank =7
If Bo<50 then level 1.  Void set up (){
If Bo<100 then level  pin mode led bank                                    output
If Bo <150 the level 3
Let mark=0.             Void loop(){
Let space = 10.      Int reading = analif reas sensor
Goto pulser.           Int value° Mao ( reading ,0,1022.  ,0255
                       If value
Level 1:
Let mark = 19. Delay (10)
Let mark = 10  . Digital write ( Les bark ,low)
Goto pulser.  Delay
Lev :  ..if ( value >49 value <100){
Let space =4 ,delay (6)
Goto pulser ,  digital write ( Les bank ,low delay
```

- level

Let mark =3. If (value > 99 et value < 150
Let space =7. Digital write (Les bank high delay (3) . Digital Pulser
High 7
Pause mark ,pause ,space ,, digital write Les bank ,high delay ,
Goto main ,. digital write Les bank ,low delay (10).

, 9.experience nated:
Explanation mathematics:

Z=-5x.x.x.y.y-y.y.y.y+3x.x.y
Deriv partial/derive partial(driver partial/driver partial)=
Derive /derivate partial .x(-10x.x.x.y-4y.y.y+3.x.=-30.x.x.y+6x

Explanation:
I=V/R,,
I=V.R.
ΔI=derivation
.I/derivation.V×ΔV+derived.I/derivation.R×ΔR-VR.VR.-2.ΔR.
=1/R.ΔV.-V/R.R-V/R.R×ΔR.
=1/100(5)-30/10×10(-8)=1,9A

-explanation :
y=integration × sin .sin.sin.sin 5x.×cos.cos5dx.

=1/25.sin.sin.sin sin sin 5x-1/35.sinsin.sin sin sin 5x+c

-y=integration ,sin .sin.sin.sin.×5xcos.cos.cos5xdx..

-y= integration.1/√16x-x.x.=dx
=64-(x-8)

y=.sin sin .sin.sin .,mx dx

=1/4x-sin2mx/4m+x/8+sun4mx/32+c

y= integration..e.x/2 cos 3x dx

.=0,324e..x/2..sin3x+0,0054.e..x/2..cos .3x+c..

-integrale . -x.x +3x+4/x(1-2x)(1-2x)..dx

-integrale...10x.x+7x+1/(2x.x+1)+4x-1)..

-d.d.y/dx -7dy/dx+6y=2x+3.

-y: m.m-7m+6=0
m=6,,m=1.
YC=A.e...6x

-dy/dx...
d.d.y/dx=0
0-7c+6cx+6D=2x+3.

-Question :
3/x = -x+4
x.x -4x+3=6
(x-3)(x-1)=0..

Δ.vy=2πx×(y2-y1)xΔ

=2,667π units ,,8/3.π units
Δvx=π.y.y×Δx..
Vx=π integration.y.y dx
=0,685π unit

Δ.My=π.y.y Δx..

X=1,798/2,152=0,836

2x.x=3x
x(2x-3)

Δy=(y2-y1).Δx
=0,542..

ΔIy=(y2-y1).Δx.x
=0,316 unit

y-y1/x-x1=y2-y1/x2-x1

Rac1=0,1+0,25=0,35ohm

Cos $=P/VRM×IRMS

Nmax=k.s cos $/k.s.cos.$+2p×100%

-K=√Po/PSC..

I1=S/V1..
Z1=ZA×ZB/ZA+ZR

Energy=P.t

Pu/u regut=I2(Re1cosx+X.sin $/vs)

EP=3300/√3.
f=NP/60
KP=cos alpha /2=cos 30°/2=0,966
EP=4.f.flux.Tp.kp.kd

I=ER/z

Pi=√3.vl.il.cos

%,s=ns-n/ns×100%=5%
-powder developed = rotor output 28kw
Rotor copper loss= rotor outputted (s/1-s)
=28(0,05/1-0,05)=1,474kw

-powder input rotor output+rotor copper loss +rotor +total
sector loss
(28)(1,474)+(0)+(1,08)=30,554kw

Pi=√3×vl×iL×cos
IL=30,554×100/√3)(525)(0,8)=42A

-powder output = rotor output frictional loss = 28-
0,8=27,2kw
efficiency=Po/P1×100%=89,023%
-from triangle A,B,C

tan (41,41°)=BC/750
BC=661,447kva
From triangle ABD,,tan (25,842°)=BD/750.
BD=363,243 Kvi ,,
Installation KVa ,= BC -BD==298,204Kvar
Cost of capacitor
Bank = (298,203)(295)=87970
-kva charge before installation of capact bank =(1000)
(132)=R232.000
KVa after installing.
AD=√750+363,243.=833,334kva
KVa charge after installation of capacitor bank =(833,334)
(232)=R110000
-monthly savings in KVa charge
R132000-R110000=R22000
Number of months =87,970/22,00=4

10. Explanation, installation
10.1 Rules : scope :
-normative reference :
-definition , abbreviations
-term
-compliance
- application standard,
- marking of equipment
- embedded generator
-Protective equipment:
-characteristic ,
-installation requirements
-Generator :
Generator circuit arrangement
- interface point requirements:
-integrated system requirements:
- electrical energy storage system asynchronous inverted ,based generation.
-asynchronous machine verification testing general inspection ,planned
- testing earthing ,bonding specific , embedded
- recommended labell close ,Laball denoting ,main AC isolation

- EIC sans
| System size(kW)| minimum

-|PV Modules|design qualifications| IEC
Ammonium. |test module|IEC ,61115-1-2
Salt mist. |. |
Safety salt. |
PV connector|

RCM

-inspection requirements

_____
-component. | Requirements
Section | check verification
- DC syst gene|

_____
-test report low voltage embedded installation

- warning equipment part of embede generation.
Main switch ,Labe sans 10142-1 clause
Photovoltaic systems

-Pv module ,2 DC strings ,2 DC combiner box ,DC disconnector,5 surge protector DC to AC invented ,AC disconnector ,solar load controllee , seg ,Sister,10)rcd type B if not galvanicallt isolated , options , utility safety switch main distribution , utilisation box

_____

- PV modules| total nominal | total| total

Install yes no | string array|nominal nom
PV modules|
Configurati|
-module
Technology|

_____
Inspection and test
Note | existing|new ,altered
-circuit fuse. |
-switxh
terminal ,DB |
Marked label
-anti closed. |
Death protect test |
Synchronous
Max gas calcul|
Voltage cell A |,

- Supply side measure application

11. Scheneider: guidelines
-_____
Generation |distribution| consumer
transmission|substation| consumer
-power
Plant
Generalised| substation| industry infrast

_____
-photovoltaic installation monitoring .
Requirements for self consumption ,case of self consumption.

- utility seal power plants ,500kwp , upward ,
-system based on a SCADA , supervisor control and data acquisition DC / AC ..

.

_____
-protection LV generator set and the down stream
Generator set parallel connection.
Parallel operation ...

- if sum of the motor power is high simultaneously Starr up of load generate high pick - up current that damaging a large voltai drop due high value non starting of rotor temperature prolonged starting .

-tripping thermal protection.
A Generator characters Sn =130 KvA at a power factor ,,0,8 UN = 500V ,,
XD=20%,,is =750 ,if the sun P motor is 45 kW (45%generator power sum calculating voltage at start up ..
Sum power = 45ka ,I'm = 81,,hence starring current ,I'd = 480 for ,2 to a 20 s , Voltage drop in the busbar simultaneously motor starting

Δu÷u=(id-in÷isc-in)×10..in % { 55%
- Δ U=55, which is not tolerable for motor faillure if the sum Of motor is 29kw(20% generator power , Calculation sum P motor =20kw,,I'm = 35A ,hence a starting current I'd = 210 A, for 2 to 20s voltage drop on the button,,
ΔU/U=Id-in/isc-in)100
.

11. Nated :
industrial electronics explanation.

- transient calculate the value of highest resistance required to allied
oscillation to place .
Let ,1/LC=R.R/4L.L:..
=√4(32,25×10.exo -3/22,75×10.exp 6 = 75,302
-fn =1/2π×√1/Lc-R.R/4.L.L

=1/2π×√1/32,25×10-exp-3 (22,75×10. Exp 32.

=(0,1592)×(104,383)=16,6hz
-step calcul Vi (max) .
C.max = Vi(max)÷V/C
Vi(max)=555×1,55×10,exp /10
RF= Vo×RM÷RM×Rf=RM+RF(Vi)=Vo×Rm..
RM|(Vo÷V1)-1
=1,55×10.exo -3 |1,55×10.exp -3..
-task --->design concepts --->computer>>>display..
Use , existing design,use existing formula,modify , generator

- Vmean at 0°=√2/2π×VRM×(1+cos alpha)
√2/2π×240(1+cos 1)=108,038v
Meant at 90°=√2/2π×VRM×(1+cos alpha)
=√2/2π+240(1+cos90)=54,019v
- Vmax=√2×Vrm
=√2×240=339,411V

IRMs=√2/2×irmax = 10,60..

P2=√P1.P2
=√104x×800
V1=Vr1/N=0,4×60/550=0,0436mm.
m=P1.P2= 104×0,04364=0,05416kg
V2=m.R.T2=0,05416×0,287×292=0,01574m
P2,288,44

Vs =v2=π(D2)/4.D=0,01574=π(D2)./4
P=2.n/n-1.P1.V1.[(P2/P1).exp .n-1/n -1]
=95,69kw
- prerequisite= pact /n = 95,69/0,88=108,74kw

-at ,44,8°c ,,h1=188kj/kg
at 93,5°c, H2=392kj/kg
At 1500kpa , 350 °,,
H4=3148kh /kg ..
h plant = ms (h4-h1)/mf×hv. ×100/1
=5400(3148-188)/600×3200×100/1=83,25%

EE=ms (h4-h1)/mf×2257
=5400(3148-188)/600×2257=11,803kg,steam /kg fuel
Qecon = ms (h2-h1)/mf
5400(392-188)/600=1836kj/kg

At,1500 kpa ,hf = 846kj/kg and ,hfg = 1946kj/kg
= 2595,5kj/kg

Q,super = ms (h4-h3)/mf
5400(3148-2595,5)/600=4972,5kg/
Q,flag=m×.cp.×Δt
(15+1)x,1,045(210-24)=3109,92kj/KJ

Qin (KJ/kg)	out KJ /kg	%
Qfuel=. 32000.	Qecon=1836.	5,74
	Q Eva=19831,55.	61,97
	Super. = 4972,5.	15,54
	Qflugas. =3109,9	9,72
	Unaccount= 255	7,03
320.	3200.	100

~=C.p/CV=1/0,712=1,4
T2=T1(V1/V2). exp ,alpha -1 = 28(13/1) ,exp ,1,4-1 = 806,26k
T2=P1(V1/V2)=10,325(13/1),exp = 3674,83kpa.
T3=T2.P3/P2=806,26×5000/3674,83=1097k.
Q2-3=2/3.QT
Q3-4=1/3QT.
(2/3).m.c.v(T3-T2)=(1/3).m.c.p(t4-t3)
3×0,712(1097-806,26)=1(t4-1097)
T4=1511,01
V4=T4.V3/T1=1,3774m
T5=T4(V4/V5).alpha -1

ASR=1-Ts-T1/(T3-T2)+aplh(T4-T3)×100%=62,47%

- explanation cpd, continue professional development ,
Scotland outcom qualifications,UK qualifications:
-**13. research on papper libry text book**
Bibliotech:
Reference:resource
-uk magazine for electronics technology and computer projects .
EPE , everyday pratical electronics
Order book ,8$,,10$,,3euro ,200rans
-Projects and circuit,series features, regular and services
-Topics : Scotland magazine second voice recorded module: record two ,four eigth different message clean and clutch free line level audio output can feed an amplifier or PA system ,8 bit recording quality user selected bandwidth..

- Scotland:Applied skill engineering electric , Engineering electronic engineering science , mathematics engineering

-Topics : scottland outcom
PIR - triggered mains switch ,use a domestic pie system to switch any mains -power device ratesup to 10A..
-topics : multti function , intelligent remote , controlles dinner the ultimate dimmer project using a standard handheldsr remote ..

-topics teach in 2011 part :logic circuits - our to be missed introduction to gates and flip flops..
Microchips microsti k development board..
-10.constructional project:
Design concepts: Hk828 module record 40,60
-getting the messat : module jump random sequence.
- how it works: function heart module architecture
-labelle the block diagram of the hk828 voice recorder chip while the recording process relies on audio sampling the audio is not stored digital but used and analoguw sample and hold system the analogue sample stored sample ..
-samplung rate : capacity array means that HK store total ,8000samplw per second
total ,262,144/8000,,42000 sample ,4200 total ,262,@44/42000, recording bandwidth fidelity propertionaj sample ,2khz , samples ,just 4khz..

-circuit details , 4,7 if ,,and 220kohn ,19pin preamp and AGC,, circuit vis couple 29,,5,8hz,,47kohn , switch logic signaj teeminaj .

-parts list multi message voice :
1,PC board code 797 available Epe pcb service 110mm×57mm.
1).electre microphone insert .
3) ,3 way terminal blocks PC mounting
1), 2way terminal block PC mounting
3), 2 2- pin section of Sik header strip.
3 jumper shunt
1 ,)28-pin Dik ,ic socket :15,24mm spacing.
1)8-pin Dik ic socket ,7,62mm spacing
1)2.5mm concentric DC power plug ,PC mounty socket ,PC mounting

_semiconductors :.1 HK828 voice recorder IC (ic1)
1)LM358 dual op amps (IC2)
1)78L05. +5regulator ,reg1
1) PN2099,PnP transistor Q1.
1) 5mm green led (led1)
1)5mm res Les (led2)
1)1 N4004,1A diode ,D1
-capacitors :

1) 2200uf , 16V, radial wlectr.
1)220uf, 16V radial elect
1)22uf,16 v radial electric
1)10uf,16v
1)4,7 if tag tantalum
1)220nf ,100v MKT metallised polyester.
1)100 nf ,multiyar ,monolithic ceramic ,
-resistor : 0,24w,1%
1) 470,kohm,
2)100,kohm
9)22k ohm
1)100 k ohm ..
1) 220k ohm
8) 47 k ohm
2) ,10 John
2) 680.ohm
1) 47 ,ohm

---

12) constructional project : IR remote control ligth dimmer module,the circuit is based on a PIC 18 F ,1329-U/SI microcontroller ,a triac and and IE detector (IRD1)the two RGB ,LED. give user feedback in the operation and setting.
-power supply: micro synchronisation waveform connecting neutaj ,,derived from the mains via a 1kohm ,5w , resistor and a 470 nf (X2) capacitor and resistor act as current limiting impedance for association ,5,6v zener diode ZD1,the supply works as follows,for positive half cycle of the 230v,AC current flow via zD@,the ,470nf ,, capacitor Nd 1k.ohm ,5w resistor same time , electrolyte capacitor capacitor is charged ,up then for negative half cycle of the mains current flow ,via D1,the 479nf capacitor and the 1 k.ohm resistor ,the results is that the 470,if capacitor is charge to ,5,6v-0,6=5V..DC
Impedance of 470 nf ,series 1 kohm ,,micro,,5v supllie,up 23ma ,IRD1,, supply bcircuit two RGB LED are connected six cathode connected to a different I/O pin the common anode two RGB LED connected together 5v,single 1 kohm ..
IR remote are amplified filter decoder received module IRD1,,the 1000 ohm ,resistor capacitor are module to decoupled it 5v supplies the data output at pin 1 of IRD#,is connected to pin 10 of ic# and configured..
-construction : intelligent dimmer is built on a single &sider PC board code ,799, measure 76mm×50mm ..

_____
Part list intelligence dimer ,
1.PC board code 799,acat from Epe service ,size 76mm×50mm
1. Ip65 sealed ABS plast case Witt clear lid ,size ,,125mm×85mm×55mm(jaycar HB-6246)
1.flush mount ,3 pin main socket ,jaycar ,PS 4094 similar
.1. IEC make chassis connect with mounting holes jaycar ,PP-4005
1.)10 MHz crystt(x1)
1)47uf, 5a inductor (jatcar lf-1274
1)4-way Dinklage screw terminals plug ,jaycar ,HM-3124
1(10A,ISC main cord

-semiconductors :
1 .pic 1
1.ie receiver
1.

-capacitors: 1470 ,16v electrolyte
-resistor ,: o,25w
- miscellaneous:
3M3×25mm nylon screws (to secure PC board.
2M3×15mm,nylon screw ,for IEC connector
3 M3 x12 mm nylon space ,
10 M3,nuts
-1)1 ok mm of ,0,7 mm dia times copper wire for links ,,

1)200 length ,3-core mains flex (250v,,10A ratt,
1) 4,8 mm res spade conductor,fully insulated ,
14,7m yellow spade connector duly ,5)100 cables tie

Add,part requirements testing
1)12 AC ,500mA,or 1A plugpacj,
1)12v,,300mA,ligth bulb (jaycard ,SL 2656)

-construction project:PIR -triggered main switch:
Futer detector ,20m away ,two pair telephone cable , switch unit also provide 12v power PIR detector cable switch main rates relay to switch the power twin 239 AC ,outlet ,relay contact rated 20A, switch. , 10A limited,10 different ,, switch power load any time regardless ,switch units fits ,UB2,size plastt box ,, switch itself battery operated and switch low device if about ,80mA,12v ..
:how it wot:block regulated 12 volte power , internal circuit plus unregulated,17C ,DC power virtual contact ,which are normal close ,open when detector Sens movemt.
Contact unit also connected ,12 line detector contact open R1,and it's output switch low ,this action issued set reset ,flip -floo ,normalt resting ..
Switches intu set state Q high used a transistor driver circuit energy relay ,power switch 239 AC outlet and loads, at same ,sR flip flop switch to A
Output multi stage remove reset counting pulse from simple clock oscillator ,which run 0,9374 the reason odd frequently clear , the binary counter has 14 stage but make only from internal flip flop 4 to 10 (04-19)and 12 to 14 (012-014) we rotary switch S2 to select one 10 output ,si rotor of S2 kept until the selected counter output switch
This happens a soon counter has received the appropriate number of clock pulses,eigth in case 04,16for O5for32,for0664,for 07 switch high after 8192 pulse been counter ,selected counter switch low situation coupled via capacity c1, resistor R# inverses I..

-main connector ,three connector ,iex green wire , yellow main wire ,T1 longer ,same wire 160mm , outlet socket ..
- insulating shield ,two outlet socket insulation material pvx ,
-final assembly: step the two plug into socket make noctch , completed box ,,
-Pir : testing or adjust..
In used ..

-parts list trigger main switch,
PC board code available service size 147mm×69mm
1)ub2-size plastt box ,197mm×113mm×63mm
1)PIR sensor
2)heatsink ,19mm,square t o-220 type ,
1pushbutton switch spst (S1)
1 rotary switch,1-pole ,12 position (S2)
Point knob with removable pointer insert .
,1)6- pin Rj12 socket ,PC board MTG (con1)or ,3way PC board mounting termi block
1) 14- pin Dik ic socket ,for I 1
16 pin Dik ic socket for ,
1) power transformer ,12,6v/2va,2851 type
1)29A mains rated relay ,chassis MTG (RLy1)
1)IEC main plug , panel mounting
2(mains sicker flush mounted
4 main socket ,flusg ,15 mm long ,M3 tapped,. nylon M3 machine screw ,10mm long csk head ,N3 machine ,6mn,long pan ,solder lug ,,nylon cable tie 100m ,25 mm length ,6 mm diamt heatsgrink tubing ,
-semiconductors: quad scmit band ic1,4093B,,4069 binaicounyer,12 regulatory,PnP transit,led green silicon ,,
- capacitor,
: resist

-capacityi

-explanation: Project a plethora of , together with the pic programming ,
-PIC training course.
, training development course enhanced ,pic programme module,
-bool expirmenting .
Experimenting with PIC microcontroller,this book introduces pic programming , jumping straight in with four easy knowledge 8 binary.
Explanation logic
- digital logic , circuit basic building digital circuit and system .
-possible , switch and lamp logic ,
-lofic gate with inverted output ,,
Y=A+B
Y=A.B
Inverter ,,y=/X..
And gate ,,or gate ,,and gate ,,nor gate. ,exclusive ,incluve gate.
-Bistables ..D type bistable ,
D-typpe bistable,,j-k bistable ..
-pratical logic circuit..

-build the circuit wizard way : opening to gates , gate number

Intruder alarm: real life application of simple logic intruder alarm push to break , advance...

- ripple counter..
-investigate : a block schematic diagram logic syst ,the system is designed to alert the flight crew visible and audio warning ,door switch logic signal respective door logic 0,when closed warning indicator active low requirements logic 0,to produce a visible audio ,study the circuit carefully and then see if you ..
1.what logic level appears at point of door closed ,wath logic level appears x,y,z ,,wath level appears point x,y nose door open other closed ..

- circuit surgery : collector feedback theory /bias ,,
A=So/Sai,,
feed factor,,loop gain ,,Sf°BSo

Sai=Sin-beta So
-So+beta So=ASin ..
AcL=So/Sin=A/(1+beta+A

14. Files system. Record academic and certificate diploma,

1.Pocket number.
Implementation work
Data right,met investigation:
Project : drawing :
Career project : theory circuit
Schematic
Experimental : workshop workplace school class pratical career guidance
National trade examination :theoretical and practical ,n diploma 18month
Memo tech ,
Project drawing: interpretation
-Mathematics graphic draw :project
Line point

-Electrical trade theory draw labell:
Circuit component make:
Resistor cell,baterrie ,AC DC circuit current,lighting washing machine , transmission generation AC inspection

-insustrial electronics draw labell
Circuit component make:
-engineering science
Graphic and circuit ..
- grade total career ,staff theory learn
Pratical exam test trade assessment
Engineering electrical.
-fault find diagram schematical .
Relay

-installes rules ,circuit diagram,

-lofic system

-control system :

-15 .experimental,.projects pratical trade framework qualifications marks : certificate diploma 6 month semmester trade..
Trade theory -pratice frame work
Component frame ,electrical and electronics
Drawing : make circuit tools process make circuit framework
Trade pratical engineering:level5,6,7
Process
Design
Designation unity| ,component| ,tool trade|
-male tool pincil draw
Make, resistor ,condensator charger circuit tools make drawing .
-makee installation lighting way switch :
-makee transmission ,generation ,drawing ..design.

3.experimental :project drawing
City power Eskom advanced career
Drawing workshop and workplace ,
Library on line project
On line. Power engineering,advanced
Scheneider,Eaton breaker design
-drawing diagrams city :
Metering circuit: design
Installation city transmission generat drawing schematic:
Installation:
-drawing interpretation: discovery electronics
Drawing make: installation
security alarm ,police alarm design intelligence robot circuit timer 555..
Computer electr

-4. implementation integration system .
Guidelines guidence pratical school

Microsoft project azure ..GitHub ,visual studio gith lab
Work item : epic item project repository project issue project run project code source readme licence,IP drawing circuit

15.1 Trademarks
T Blaser tableaux

Met career police tpm , counter terrism ,
Engineering systems:met block mark
TMP circuit maintenance meeting break

Data right ..
Cell phone:
IP licence book rwiten integration : met career detective ,counter flip flop ,electronics ,CCTV circuit right , cameras phographic right lens zoom circuit , repaired center cellphone city vs transmission Telecomm office vs Microsoft office vs circuit power vs installation electrique compagny police data certificate copy license copy private police ,,policy city power Eskom policy claim drawing design power cost economic load ,outage circuit
.

Total ,pratical , policy claim vs claim alarm maintenance total career ,
Security safety claim nated counter terro record irregularity phase circuit complain circuit implementation:
-total framework policy vs police record LDR framew not meeting vs Terri counter irregularity vs

Total grand :grand council department energy Eskom policy ,city power policy terro counter emet. Irregularity mining company trade mark , telecommunication claim vs customer trade marks compone maint Tom .
-total grand met tblazer Salesforce energy claud metering energy co circuit incidence force sale policy
-data right energy metery claim. Vs alarm relay delay dimer switch.
Microsoft project azure blue defender
Regulatory factor ,limited Freq , energy cost. Bill cost energy

Intergration circuit switch. Record total
Physical meeting .. script inspection

16..Experience pratical:
www elektor .con,
Test book

Order booking :200rand ,,4eu
- microcontrol analogue audio , digital,test measurement.
-Pratical: quick to implement reusable multi plat form , fts.
-sub long term weather logger .
- ATM,18 compass.
- j2B universal MMI module using ,arms cortex ..
- FT232 ,USB Serie bridges/BOB

Chip kit first Arduino compatible ,23 bit microller development platform,design manufacture.
-Parallax : li - ion power pack charger
-reflow mate :
Supply voltage: 230V/50HZ only
Power : 3500w
Weight: approx ,29kg
Dimensions: 620×245×520mm (w×H×D)
Heating method: combined IR radiation and hot air .
Operation: directly using menu buttons and LCD remotely using PC software and USB connection.
-menu language :
-temlerature range ;25 to 300°C
- Maximum PCB size :400×285mm

-temperature sensor : 2 internal ,
Optimal temperature distribution thank to IR lamps
- Drawer opens automatically et end of soldering ,
- Glass open automatically at end soldering process
- interactive commander for data transfer
Command | action
h =help. | Print available command
_____
-Current drawn by entire system at ,3,3 V
CPU
frequency| sleep mode | current drawn
8Mhz. |Non. | 5.8mA
_____
Fuse settings ATmega 88
Fuse | Ext| OxF9| 8MHZ intern oscill (divided hence cpu clock is 1Mhz
-$_____
-weathet logger operates supply voltage of nomminal 3,3v power over USB ,is available 17 ,VCC of BOB ,FT232R serial -to-usb converter module for stand alone operation unit power via BT ,, supply voltage between ,3,5v and 30,V regulator ic3 diode detector again accidental reverse polarity connection important employees reduced measure to maximise battery life in stand ,alone operation microcontrol is responsible cincentre measure effort circuit ,3,3 V under various conditions is shown , alkalt or NIMH ,AA cell , 4,5 v or 3,6 v nominal capacity of between ,2Ah and 3Ah ..record data for least 1000hours instead of three AA cell free the employee single ,Li - ion Lipo cell supplies ,3,6 or 3,7 ,, on power saving measure is to carry , 100second ,, measure system draws extra about ,2,5 mA ,,120 ms ,when taking reading in between ,10ms corresponding to the 1hz interrupt the device is from ,power save mode 59 second ,I/o clock micro controller order need to be count the pulse in order , CPU..
Result disping result
Test measurement:
HH10D humidity sensor module feature .
Re

Swegethttps://GitHub .com/milkmist)mist rewmaster tools / filter m.
Bios serial received firmware download request from the device.
Flyerm uploading Kerbal (83475 bytes
Upload completed (9,5kb/s.
Booting the device
Done
Hello
- the pattern obtained after numerous iteration of the command pixel [I]=y*y* x>>5..
Testing in development board ,,use serial port to upload application ,,serve a console for displaying the message sent to print f +) the Boras fitted with a ,3,3 serial port ,located between the ethernet and VGA connector ,pin marked ,board received the data marke tx is used by the board for transmission the GND is obviously ground ,3V3 is a 3.3 V power rail serial long use 3.3 level (not 5v or RS -232) or the combined devdlop
- organisation display of the measurements results ..

-CMOS compass module: board .kmz 51 chip ,the resistance variation in resistance cause voltage variation which is amplified,LMC 6036 ,sensor electronics magnetic heading us calculated micontroller bus ,corrected module positions ,pin 7 ,AC power grid in him parameter story EEPROJ
- orienteering ,4 load firmware power manufacture ,want to recover the module function bearing send following by modulating..
Wiring block
- digital communications with the robot electronics cmps module
Graphical representation of the compass point
-circuit diagram the construction file eagle files component list software
Keypad : consist 12switcges ,4 to the left of the display ,4 right , rotary encoder switch encode build

push button three encoder space ,9 encoder build in button 27 button ,a5×6 Matrix need connect key I/o scane 4 key free way , function available some function make ,use diode avoided problem phantom key several press ,a situation turning the diodes package ..
Different variations on the 2×@6 LCD ,key swiy offset
.main function resistor R38,to R 44 board turned using button S1,s8,s12 key fitting , resistor provide. ,turn key circuit by battery function asymmetric matrix line have limiting resistor (15-R25) is final circuit ..
- display: board offers possibility of fitting ,2 line by 16 character (2×16) display ,4 line by 29 (4×29) ,,by 16 character connection ,5v power ..R ,36 ,R 41 is necessary T relay ,R1 ,120package .
-Powering : the board main rail (V+) is 5v microcontrol itself ,3.3 derive,3 ,, are directly connecting the display available on transistor (piooo,6,,Pio 2,8. Etc pad k1 and k2 ..signal
- construction:
- implementation : board

- twitter message local area network LAN wireless configt.dialog
- communication on the dso board.
Detec signal the ratio signal generator DSP ,101dv,and this ,n level of ,94 db application peak to peak with sinuskidaj ,0,53 to 0,59 time supply average

Test measurement:
Component list
Resistor :.R1=220kohm
To R5
-capacitors : C1=4,7uf ,63 radial to C7=470nf.
- semiconductor: D1,D2=BAT42,
T1=BS170.
IC1=
Ic2=ATMEG,,
Miscellaneous:.S1,S2,S3=6mm switch ,PCB mount
S4= single -pole switch
X1=32,768khz quartz crystal
LCD 1=DOG @62w..
Mod 1=BoB ..
Mod2= humidity sensor HH10D
K1=6-pin(2×3) pibheader option iso interface
-20-way socket strips SIL for LCD1 ,,
18 -way(2×9) socket for mod @.ic socket for Ic1(8-eay and ic2 (28 -eay ,PCB hi
Settings and function button S1 to S3
Print circuit board.
Humidy sensitive used transducer elements frequency 6khz to 7khz measured AT mega ,value with calibration par ameyer again stored series module frequently counting the output pulses module over second ,the 16 -bit counter timer , capacity 64 kbyte,,stored,record ..
-soffward : firmware for the microcontroller is written in C complied using ..
Program in weather station,LCD to control display ....
- construction: double site circuit board diagrams components mounted in board ,socket solder components,fused iso connector ,k1, programmation job ,program used sensor module serial to USB module , switch ,S4 position to select external power ,3,3

- operationel ,: treer button (S1,S2,and S3:,S1 cycle variouse
Setting
----_____

C28=C26/(4Q.Q×(1+Ao)),.
R24=2Q/2(wo×C26)
R25=(1+So)×R24,
R23=(2+So)×R24/So

If ,A=0,7071 and So=,these formulas sin plify to ,
C28=C26/4
R24=1,4142/wo.c26)
R23=R25=2×R25....

_____
Basemodu

Lab testing ..prototype audio convert implementation:
Component list
-Resistor=
R1=330 ohm
R2=680 ohm
R3= 470 ohm
Capacitor
C1=100nf
Inductor: tri ,home
-semiconductors
Led = standard led yellow
- miscellaneous, cinch so let ,solder pins ,USB audio
- circuit : circuitry design ,signal pin @, coupled resistor impedat former signal (0,5vand 75ohm) coupling transformer provide galvanized cover upper frequently transfo limited couplings toroidaj core material suitable signaj ,50Mhz ..
Construction: PCB

- schemat diagram of the flasher -
 Circuit the time integration module
Base e two operational amplifier ,A1 and A2 ,- ,non + input and output,varyyng voltage V1(t) is applied A2 driver integrato ,R c and A2 ,Rc stage ,add resist
---
Light sensor :
With twilight detect: sensiu circuit
9vdc. to .15 VDC..ligth room circuit generate ,lm257 ,R1 and R2,,voltage dived ,,R3 and R 1 circuit , Ooamp ic1 wired buffer voltage LDR suitable R2,voltage pin IC,,,IC1,,, ic2,0 other ,,22kohn R,10two comparators ,ic2and ic 2b compare income p1and p2,0thar output R 90,be ause ,, determine dark ,ic2. and I 2..

-explanation teach ,in
A broad based introduction to electronics: digital to analogue and to digital conversion: electronics studies school college UK ,include byec level 2 award electronics diploma in engineering level 2 experienc
- e read ,teach teach learn experience test electronics circuit
Learn :
- beam break flash trigger ,build necessary time delay photo flash response IE
-Parts list active loop antenna :
- @ PC board code 813 (ant loop) 31mm × 94,mm
- @ PC board code 814 (rad loop) 58mm×48mm
-@weatherproof plastic box ,eg
130×54×83mm plastics box
-@8-pin IC socket
- semiconductor:
1BA4560 dual op amp (IC@
1 k8L08 or 78K10 voltage regulator.
2KDV ,149 varicao diode (D1,D2)
-capacitors
-3)100uf ,16v electrolyte
5,) 15 nf disc ceramic.
-Resistor (0,#5w, 5%)

..micelanot
_____ Beam - break flash trigger.: the infrared beam is generated by led1 to led3 and picked up by phodetector diode ,PD2,,op amp ic@ b function as current ti voltage ,while I 1 is wired as non inverting amplifier the latter derives transistor A mosef briefly sait h trigger outbut when the or is interrut .
-circuit details:
Power isderiver battery in detector unit IRv beam from source unity OD ,3,5 mm jack plug con@ mate ,, detector unit IRv source unit ,IR pgotodetector diode ,is connector diode ground and the inventing input ,out site,,+1,7 v ,and +4,0v ,IR ligth is falling on OD@ dark ,
basically ,#2kohm ,,2,7kohn ,,220uf ,, Qrin writing amplifier ,, s
-Switching the triggers output: Q1 switched when IR beam falls on PD1 collector voltage is normally,beam interrupted ,mosef ..
-parts list :
IR source unit :
*1 PC board code 808 ,57×26mm
1)UBS size box ,8#mm×53mm×31mm
46mm long untapped spacer ,4 M3,×13mm screw ,counter sink head
nylon cable tie ,75mm long
12m length ,8cable
23,5 mm ,monk jack plug cable type ,
- 35mm IR ,led (led @ to led 3 ,1)820 ohm
-detctor unit :
1) PC board ,code ,size ,,122mm×58mm
2UB3-size box ,129mm,×68mm×44 mm
1)SPDT mini toggle switch ,s@
@)PC mounty ,,3,5 mm stereo jack,socket ,,
- PC mount ,15 mm tapped spaced ,8 M3 ,6 mm machine screws pan head
- 21 mm PC board terminal pin,, 19v ,,battery clip lead
1)8-pin Dik ,,IC socket ..
1)30mmm length of ,13 mm to ,,15 mm length of ,12 mm to ,15 mm diameter black pvx conduit or brass tubing ..
-1 piece of ,IRv- transparent red film ,approx snap connector or ,
1×4- way ,AA cell holder .
1×2 way ,AA cell holder

- semiconductors: dual op amp (ic1)
1Bc33,nob transistor ,Q1,IR pgotodetector,
- capacitor :

- detector board final assembly n: construction v
-cinverting scanners for ,VHF/UHF discrimination tap socket ,the basic setup for received ,159 MHz signsk ,,..
-
PC board is secured to black the lid M3 ×25 mm tapped keypads pluggi into machine socket ..
- precision resistor:
-Lcd module: remaining components installer ..

- digital insulation meter :
1) PC board ,code (main /dis)109mm×84mm
1)PC board code 859 (dc-dc con),70mm×51mm
Ub1- size plastic box ,157mm×95mm,53mm
1)LCD modut,2 line ,16 character with back ligthning.
1 ferrite pot core pair ,26 diameter enameled copper wire ,
1) 100mm ,lengtt ,o,7 mm diameter enameled copper
1)8m length of ,0,7mm diameter enameled copper wire
1)100 mm length of ,0,7mm diameter tinned copper
1)10×AA battery holder. 0,7 mm diameter pinned copt
1)2- pole rotart switch ,PC board mounting ,wit 16 mm,S1
1)SPDT mini toggle switch panel mounting (S3,S3)
@ Min Dil relay ,spt switch p with 5v
,2) binding post ,Bana jack (1 red ,1 black .

24 mm solder lug..
1) ,16 -pin lengi of Sik socket strips
1) 18 pin IC , socket
,4(25 mm ,m$ tapped metal spacers

Block diagram of the ,16 ,bit digital potential the desired out voltage is entered via keypad and microcontrol IC 2 the correct binary number to drive the ,16 relays in the ,R/R ladder networks - arena loop ,

Experience trade mark , engineering science career ,motoring vehicle,power machine , engineering,trader
Compagny,Transnet motoring career , ford career Engineering system and Toyota , nated ,,
Magazine collection motoring reviews
-rwiten oral relate :
Specifications :
- 1.engine:
-cylinder : four ,in line transverse
- fuel supply : electronics multi point ,injector
-bore /stroke : 81,0/96,3mm to 87cm
-cubic capacity : 1799 cm cube
-compressiin ratio : 10,5 to 1
-valce gear : s-o-h-c ,valve per cylinder , variable valve timing
-ignition :five
-2Engine output:
-Max power iso(kW)103
-power peak (r/Min)6300
3transmission:
Forward speed
-low gear: ,3 ,142 to 1.
-2end gear :1,869to 1
-3rd gear : 1,235to 1
4th gear : 0,948 to #
Top gear : 0,727 to 2
- reverse gears :3,307 to 1
- final drive : 4,294 to #
Drive wheels. : front
-wheels and type
- road wheels : 16×6,5j alloy
Tyre make brigestonr turazan ,
Tyre size : 205/55,R 26 92v
Type pressure front : 220 kpa
Type pressure rear : 220 kpa
- spare : full ,size disc
5.brakes:
Front : 262 ventilated disc
Rear : 262 solid disc
Hydraulic : ABS , with end and bas.
- street :

Type : rack and pinion hydraulic ,speed sensitive power assist
-lock to lock : 2,7 turns
- turning circle : 11,6 metres
-suspensiin :
Front mac person strut ,lower wisthbor e gas filled dampers anti ,roll bar multi coil gas rear
- capacities :
Seating: 4/5
Fuel tank : 50litres
Boot space. : 304 dm 3:
Utily space :928 .DM cube
- warranty and service intervals :.
3 years /1000.000 km warranty.
5 years /100.000km service plan
Service every 15000km:

Honda civic 1,8 Vxi; Volkswagen Jetta ,1,6 Comfortline ,ford focused ,2,0 trend ,,
Toyota corrola ,180i
Test claim t 203km/h top ,speed and acceleration to 100km/h in ,,9,44 second Honda tops at 202 km/h achieve the benchmark sprint in ,9,39 second performance

- test data : .Amarok bitid ,4 motion
Engine :
-Cylinder / capacity : 4/1968
-bore and stroke : 81×91,5mm
-compressiin ratio : 26,5 to 2
Fuel supply:common rail
Injection
- fuel diesel .
-max torque : 400nm@1500rpm
-max power :120 ke@4000 rpm
-transmission:
Shift type: 6 - speed manual
- first gear : 4810
-second gear :2540
Third gear : 1.590
Fourth gear : 1000
Fifth gear :0,760
Sixth gear : 0,630
Final drive : 4100.reverse : 4.370
Loe-range : 2729
Control 4 WD selection type electron button
Wheels : alloys
Full-size spare
- 2.measurements (mm)
-height :1834
-length : 5254
-width : 1944
Wheelbase :3095
-fuel consumption:
120 km/h ,,:8,61/km
Urban : 9,8/km
- calculate range : 688km

- performance:
0-100km/h : 20,8 second
100-129 km/h : 4,86 second

rpm @ 120km/h : 2100
-recovery point :
Front ,,RHS
Rear
- underbody protect:
Transfer case non
Fuel tank : plastic guard Rea diff non
- odometer 6,248km
-load and towing capabilities (kg)
Tare : 1848
GVM : 2829
CVM: 4668
Towing capacity ,unbraked : 750
Towing capacity (braked)
- brakes :
Front. Ventilated disc
Rear. : drums
ABS ,yes
- load capacity (litre)
Load box : 2520
- warranties maintenance and service:
Warranty : 3year/ 100000km
Corrosion ; 6 years
Service plan : 3 years / 90000 km
Service intervals: 15000

- guard motor ,police maintance
Record
Guard gold platinum ion
Eligibility car

_____

17. Specifications:volswat golf
Pricing :
Test pricing
Standard equipment; controle aluminium
- general data :
Kerb weight:1541 kg
-length:4212 mm
-width,excl mirror :1779mm
-wheelbase :2578mm
-weigth distribution front ,n/a
- ground clearance : 132 mm
- boot space : 275 litre,..
-utility space : 1305 litre
- coefficient drag CD : 0,34
Seating capacity : 5
Headroom front : 987 mm
Headroom rear : 979 mm
Hatch lift height : 2017 mm
- safety
-warenty : 3 - years : 120000km
-maintenance service : 5 ,years : 900000km
-2Engine:
Type layout : 4 cyl transverse turbocharge .
- valvetraun : DOHC ,16 ,valve
-displacement :1984 cc
- bore ,x stroke mm : 82,5×92,8
- compression ratio ,:92,8
-power kW : 188kw,,6000rpm
-torque; NM : 350Nm ,,25000,,500rpm
- power ,to weigh ratio : 121,8 kW/ tonne

- fuel injection : direct petrol inject
-recommended fuel : 95 unleaded..

- drivetrain :
Transmission : six speed
- gear : ration
1st : 2,92
2 end : 1,96
3 Rd : 1,4
4 the :1,03
4th: 1,08
6th :

Body frame with ..
Brake from : 345mm disc
- break rear : 310 mm disc
- wheels : alloy
:tyre :
- steerit : servitronjc
- steert ratio : 14,96
- turn lock : e
Suspt front : 10,9 m
- susoenst front :
Subjectivjy base averaged weights out
Driver ,gearbox ,steering ,vraj ride handling ,exterior styling ,interior styling sear , ergonomic control ,luggage space , percentage ,price value

- Performance:
Accelerated:
Speed / time
0-60kph / 3,17 sec.
0-80 kph/4,55 sec
0-100kph , :6,27 sec
0-120kph
- quarter mil , soeedo calibration ,120 kph ,error ,,116 kph / -3,3%
Overtake
60-109kph. / 3,31 sex
80-129/4,24 sex
Braking :
Average speed to zero
100-0kph / time / distance : 2,77 second /39m.
-fuel economy:
Real world test route : 72,3km
- fyej used : 6,3 litre
- our consumption:8,7 litre / 100km
urban cycle claimed : 11,2 litre / 100km
Co 2 emissions 195 g/ km
Fuel tank size : 55 litre
 - estimated crying
Test conditions: test car odinetr : 5396kn
Reading
-temperature:21deg ,c
Wind
Locay
,test note :

Car note
Hon payment calculator based ,19 percentage deposit:

18.explanation: comparative test :
Subaru.
Specifications:
-2Engine:
Cylinder : four horizontally ,opposed
Fuel supply: electronics multi - point injections
-bore stroke : 99,5/79,0mm
-cubic capacity : 2457 cm cube
- compression ratio : 10,0 to 1
Valvagear : s-o-h-c bank four valve
2 : engine output ;
-max power iso kW. 123
-power peak (r/Min)5600
Red line (r/Min). 6450
Max torque (N.m) 329
-torque peak (r/Min) 4000
3.transmission :
Type cvt
Low gear : 3,525to #
2end gear. 2,238 to 2
3rd gear. : #,641to 2
4th gear. : 1,194 to 1
5th gear. : 0,850 to 1
Top gear. : 0,850 to 1
-reversr gear. : 2,358 to 2
-final drive : 3,700to 2
-drive wheel : permanent ASD.
4.WHEEls and tyre:
- road wheels. : 18×7,5j
-types make : Bridgestone
-tyre size : 225/45,, R2891 w.
-Spare ,tyre and location ,spacy
5: brakes:
Front : 294 mm ventilated disc
Rear. : 286 m ,solid
Hydraulic ,ABS. Breaker assist
6.suspension :
Front : mac person struts
Rear .
Capacities:
seating:4/5
Fuel tank : 65 litre
Boot /utility space :348 DM.cube
- warranty and service intervals:
4 years /100000 km,warranty ,3 years / 63000km maintenance.
Test results:
Maximum speed (km/h)
-true speed. :210
-speedo calibration:60,,80,100,120
-true speed : 54,74,,93,,113
-odometer error :0,9 percent over.

*Accelerated,second
0-60. ,5,2#
-0-80. , 7,50
0-100. ,14/95
0-120 , 20,74
0-140. , .1km sprint , 32,15

Terminal speed : 264,4km/h

-overtaking acceleration: second
40-60. ,/ 2,53
60-80/. 3,01
80-100/. 3,65
100-129/. 4,41
- fuel index :
Manufacture fig :
9,2 litre /100km
Car fuel index :/1
0,92 litre /1000
Estimated tank range : 595 km
Taxable CO,2 rating : 214 g/km

-braking test :
10 stops from 100km/h measure in second at ,30 second interval
on good bitumeise
-beat / worst stop : 2,70/2,89
Average of 10 stops rating ,2,79 excell
- geardsd speeds ,km/h
low gear ; 52 , 60
2 Nd gear : 82 ;94
3 Rd. gear. : 11; 128
4th gear : 253 ; 176
5 the gear. ; 299 ; 344.

- calculated at engin power , 5600 r/ Min and red line ,6400 r/ Min
- performance factor :
Power / mass (w/kg) 80
Power / litre (kW/ litre) 50
Power / litre (ks/litre). 93
Torque/ litre (n.m / litre
Engine ,,: 1124
Engine rev/ km
- mass tested (kg)
- test conditions :
Altitude : at see level
Ambiy temp / barometric press ,22° c / 2020 hPa
Test car odometer : 1765 km

-150000km warenty and five t ,100000km service

Comparative:
Test summary class
Hyunay test scores,25/29
Mercedes Benz blue efficiency,75/100
Opel Corsa collour
- hummer H3 adventure

Design and development the TBM ,,700 is singles turboprop engined low wing monoplane aluminium and steel construction the TBN product PT 6 A ,rates at 850 sho (634) ,,522 kW take off and landing cruise flight engin power,859 ,,634 the extra ,,2529 neutical miles (2829)
-General characteristics:
Crew : 1 or 2 pilots
Capacity: 4 to 6 inclus on passenger .cockpit
Length : 10,65 m (34 ft 11 in)

Wingspan : 12,68 m (42 ft 7 in)
Height: 4,36 m (14 ft 3 in
Wing area : 18 .m.n (193.7 ft
Empty weight : 2132 kg (4699 lb)
Max take off weight : 3354 kg (7394 lb)
Max playload : 385 kg (849)

- performance:
Maximum speed : 593 km/h (320 knot ,368 mph)
Cruise speed : 467km/h (252 KTS ,290 mph)
Range : 2813 km (1519 NM,,1784 miles
Service ceiling : 9450 m (31000 ft)
Rate of climb : 12,09 m/s (2380 ft / Min
Time to climb to 26000ft

Based .
Price : | POA
Number of seats and luggage : 2 seat ,34 kg
- engine type : Lycoming
-fuel burn : 23-30 litre per hour
- tank capacity: 136 litre
- range and endurance : 2384 km
- propeller type and oper: sensenjc
-undercarriage:
- lead time orders: depend
-standard avionics: vrf Panels
-
Speed |. Size |weigth
Cruise:147 KTS| length 6,2m|MTow:794k
Stall:38 KTS. | Wing:85 m| empty :460 kg
Vine:171kts| height :1,8m| useful: 334 kg
-pulk out plan

Explanation VIP.
Paint protection that actually works approved by major Manufacturing in South vehicle shield ..
-bonnet guard ,
Headlight,front guard,side guard ,,repaired scratches ,stones Chios ,damage ,film removed ,film warranted 5years peeling ,bubbling and cracking
-_____
Journey|price|engine|power|torque|
27sxt. |
Maintenance plan: three years /100000km
-fuel tank:78 litre
-averagr sales per month
-service plan

17..Explanation engine calculation
How to calculate bore ,stroke displacement
-volymetric efficiency VE=3456×cfm÷CID× RPM,,
-Cubic inch displacement=NOC=Noc×SV
- head gasket volume: HGV=HGCT×0,785×BORE:
PVD=0,7854×Bore×DPD)+)+(VPD-VPB)= piston deck volume
- compression ratio
CR=1+0,7854×30RE×strokr÷ccv+HGV+PDV.

+ISH=HP/16 : fuel system injector size per horse
power..
VE: volume office,
Cfm: engine air flow rate cubic feet per mine.
Cid : engine displacement ,size volume cubic
-RPM= engine speed revolution per minute .
- NOC: number of cylinder
-bore =length
-stroke = length
-HGV= head gasket volume
Hgct : head gasket compressed thickness.
PDV:piston deck volume
DPV: piston distance
Or ..
SV= sweet volume .
CR= compression ration
Ccv: combustion chamber volume
Ish = injector size per horse .
HP: horse power
--_____

18.Explanation: engineering science ,stress,unity stress,type stress,unit for strain , elasticity ,hook low, straight, ductile material,young module elasticity..
-explanation : applied thermal engineering
engine testing: structure
.explain performance measurement:.
-basic parameters:
-measuremsnt of speed .
- fuel consumption measure
-measuremsnt of air consumer
- measure of exhaust make
-measuremsnt emissions.
- measure of brake power :
-measuremsnt of friction horse power.
- performance of si engin
-porformence
Calculate speed in evaluation performance development
: charge load
-bp=2πNT÷60, break,,2πnt/60,, AL ,,N.K/60
-specific output:
Specific .
Volumetric efficiency
n=mass of charge actually scke in÷mass of charge corresponding to the cylinder pond conditions.
-relative power air :
FR=actual fuel - air motion÷stochiometric fuel -air (bsfc)..
- thermal efficiency heat balance ..
Brake thermal
efficiency:= bo÷ m.f×c
-performen e:
Heat equivalent break work rejeter to cooling .
- heat career for engin ..
Heat balance sheet.
Input | kW| %| output | kW | %
_____
-explanation: construction techniques:.
Petition: record
-structure ,model aeriplane.
section :;.
Side :

Model assembly details:
Covering and finishing.
Refinement.

-construction note
Letter : .....
Materials:

-letter,|number|name|size. |Masse
A. 1. Gear 1/4 ,

Seat,frame,back,fender,back,Fook, healings,front,front axle,wheel,gasttank,rivo..
--- three wheel motorcycle: motor driven car ,,
- simplified concrete mensonery planning ,mortar ,concrete = A.P/s
-
---_____
- explanation study material and fire arm ,ballatisc
Gun
Typical muzzle energy of fire arm:
_____
-fire arm (except |calibre |muzzle energy
-air gun
.Ek=1/2×v×v(2ft.LBf/7000gr×32163.f.t.t/s.s
E=(m×v.v)+
K=450,95(2×32,1930,700)

-spefication
-Calibration:9mm ,para ,40s ,
-ovarall length : 2184 mm.
-barrel length :5
- high : 240mm
-weigth:0,81k
Construction slide
Magazine : 24 round sign front ,GPS
-test firing results :
-Ammunition : group
- factor : -41mm.
- hand load :51 mm..note accuracy average.group..fired ,25 mm...

-artillerie ,AM×30F@
Characteristics service
-types : canon automoteur,utilisation
Conflicts.
-characteristic
equipment : 4 home piece piloted longer left : 10,23 mm
Larger weight:13;10mm
Hight : 3,17 m
Mass in combat : 43,5 tonnes blindage ,size ,case lunch..

-report installer:
- mounting battery replacement step remote:
- connection to the fence
-connection , configuration
-pc board replacement
- service condity
-Pc board ,F1,Fu ,18 vac fuse..
-Lcd display,18 LCD ,7,2 output in 500ogm
Energy out put .500 ohm ,joule
-9000v ,zone monitot,1/2 control display,2 max gate
- gate and panic button input time gate ,yes
- alarm output ,siren output ..

-power consumpt under normt operational conditions ,18VA
-battery time charge ,24h
- solar power operational,60 Ah
-wire in a Serie : galvanized : @,2 mm : 5 m optimal..
High voltage ,set point :10,00 volt ,set

Balance rate installation: item..design draw element ,security access plan.

Card access reader mount type technologie.
-biometric access reader mount type be specific.
-keypad device.
-keypad,kepead securt.
-card reader with key..
- horn siren
- weather proof him
- horn ,strong
- strobe.
- car reader with turn attandance,
Tensile,revolving door
-traffic arm.
-vehicle ,exit device ,
-smoke detector,
-heat detector.
-gaz detector, carbon monoxide,electro lock, push button ,camerarwite,camera ,with intercom,
- security window scret ,heat detect,
-window contact,vibrasic,glass,floor,car drivers,overload,dual tech ,contact saity,wall motion,floor motion,
-beam fence distribution,
-

19. Explanation : pratical school
Disciplinary hearing school . trainings system orientation school career guidence :
Experience trade explain: career skill

-explanation: safe road usage teacher manual secondary:
-explanation the foundation for road :
Meaningful maturity,human dignity mordaly depending decisions,making responsible action , identification of criteria, phylosophie of life ,inclucating road safety , various level human , existing in frame of reference,co existing temporary,relation ,
- explant:the origin of technology and it's implications Forman ,technology and responsibilities ,Sens of responsibility and Education,the task of the school, requirements of the school,road safety and involved in accident, accident according degree ,type of road user accordt to racial group involved , statistics cost alcok poor vision .
- explain: traffic training secondai ,content of traffic , traffic situation,those involved,road safety , certain criteria for ,traffic training ,certain requirements , content method for ,youth levels ,abuse among , legislation and low enforcement ,vehicle ,trafft ,element , traffic hours .
Trainer methods conversation,self , training, Education orientation,
-expt differential teacher road safety education ,basis off teaching from road ,child involved , inequality child different safety Education ,road Education for school undertaking parent school local ,,locak
- explanation different road safety education and the secondary: Education concept ,secondary school ,diffet road safety , Education central ,road safety ,road safety situation, road safety orientation,road saft Education road attitude , secondary child personal,goal diffential road safety,road safety matury, psychopedagogie persscpectuve, fundamental pedagogic perspectt ,social pedagogic , didactic , orthopaedic ,irthopedidact, realisation , opportunity and road safety education, The school , secondary child basic ,,
- explanation:the methodology of road safety,goal of traffic Education , traffic lesson objective,the

learning objectives, problem settings and problem solving ,
- lesson structure and form..
-explan group course lesson , actually preknowled, actually , unlocked of new , evaluation, group discussion,class arrangements,quality teacher ,skill the teacher and group,how to handle group ,group cohessiob ,criteria for judging the success of ..
General methodology guidelines.
-chao teaching aid road safety education :
Teaching lessons modalities teaching didactic , a schematic presentation of Education , teachings software .
Teaching wath look like ,teaching wath , teaching broad ,blackboard ,conograpguc teaching aid ,poster brochure model..
-thw sons box training ground the overhead projector ,
- the overhead projector film projector .
-selecting teaching a lesson ,nature , didactic consideration,
-road: safety ,nayv,point of contact in road safety ,few partie , department transformer provincial authority vlocal , evaluation ..
-calcul situation traffic possible, criteria,test total traffic situation,different large ,self orientation up him self regards world self discovery evaluation accepted road,lesson telling lesson subject road ,time 35 minute ,lesson objecy explain pedestrian ,setting problem pupil ,stopping ,self realisation , instruction control ..
Topics :Lesson objective to explain ,learn objective pupils must knowledge the application legislation and must able to mention aspects which ensures safe , pedestrian.
- explain the problem: LinkedIn up knowledge pupi will be led to the realisation that injuries pedestrian behaviour is not only annoying to other dangerouse during lesson phase new content is gradually unlocked ,
- scheme consider energetic behaviour on pavement keep try to walk next another , stepping pavement intersection trafficking ligth buses getting out of vehicles.
- the course of , actually preknowled the pupils citoyeb Saturday morning ask

Unlocked behaviour pointed outcome traffic legislation is explained content , mentioned in problem solving is unlocked b,
- explanation : functionalism : practising of acquired insight by mean model or diagram on the black board may explain how the will intersection as an assignment pupils observations and make annoying and effective behaviour of pedestrian..
-explanation defensive driving; road sign ,warning sign ,guidence , regulation sign , traffic bsign ,hand signals ,flag signal ,overhead lane flashing signals, road marking,
- explanation: rules of road vehicles : control theory test driving.mirror blind spot ,signsk clutch ,speed control breaking ,gear change ,motorcyy ,board inspection , inspection staring , Explain manouvring test moving running left speed control changing ,incline ,turning speed judgement emergency .
- the driving test : light motor vehicle, heavy motor ,the years ,staring procedure ,moving off , inclined ,alley docking ,reversing ,making a left turn ,hand signal , parallel parking ,the road test ligth heaving , light and heady .
- changing lanes ,stopping in traffic , stopping parking , turning at intersections, proceedings ,stop traffic sign ,entering a traffic circle, leaving a traffic ,block pedestrian ,level crossing , overtake,entering ,leaving freeway ,overtaking ,on a freeway passing , freeway on Ramp..
- explain test checklist record , faillure manoeuvre point ,exceed time limited 29/18 penalty , roadworthy, violation traffic low , uncontrolled action , dangerous action , collision,

20..Explanation:
Management system information:
pratical
Science motor policy guard
-statement of insurt; statement of the administration,vehicle eligibility, important servit,policy commence date, replacement of components,claim procedures,cover provided this policy , components Covered, beneft: classic,bronze silver ,gold, titanium, polyester ,ceramii , additional

silucd , transfers it,exclusion form cover ,limit
Silver,gold titanium ,limi of indemnity,wear and tear restrictions, consequences
damage,cancellatt,jusdiction currency and dispute,fraude ,quality control,insurer rigth after , service history intarion , statutory notice , resolution.
- explanation : road warranty all passenger commercial maximi carrying capacity 200kg , cover the cost service maintenance accident ,petrol engt service relevat as .
-displacement interval .petrol diesels electric maximum service run over if 1000km or 30dats occure RMI repair claim ,
- policy vehiclt schedule still subject to Manufacturing warenty plan motor guard plan.
- faillure occuring 39 days .
- replace claim process in event of mecanique construction fail occury.
- Owen ,policy number , current kilometre ready,partict of clay ,item cause quotation,address vehicle inspected service record invoice submitted with 45 days , benefits ,5 years ,120000km ,18 years ,160009km
- description of good stolen property must descrt very accurate bear it in mind invest official searching good ,
-makee or manufacture ,modej not years ,years of products, serial number ,registration ,engine and chassis ,size ,colour ,completed ,state midst iteb ,charge that change ,

---

- **22. explanation: industrial administration management**
- explain : general framey historical background complexity of management
- general princy and groi of management thought.
-growth of management the pioneers
- outline of managet theory : definition
- business orgat: organisation the diviy of managet,
-growth of organisations stage growt ,orgabiy chart , organisation rekatu,
- organisation problem : corpsratt planint traditional and modern organit theory future reauit ,
- production marketing and admnistration.
- organisat and the manufacturing fynctt stage in production manufacti,organisation of production the manufacturer functions:
-:Products the ancillat functions b; maintent production planning and control store keeping purchasit handlit of material.
- products the advisory functy : work studye time ,method

-production the advisory functions : work study time study methods work study , ergonomic , operational research inspect.
-marketing : marketing's organisat: admnistration area ,personek management wage.
- growth of industrial relat: trade union unions emply associt collective bargaining and joint negotiation:
- personal managent : motivation of management content of a personal policy achievement of harmony of objectiy:
- the person's department staff recruitment, the manager .
- personnel functionalite organisation if personnel department staff recruitment sciencetif selecti
- job evaluation and : wage structure determining the wage structure merited rating personnel problem induction training wage and salaries:
- personnel problems: disciplinaire promotion safety labour turnover management by participation personnel statistics ., part four financial management and statisciak ..
- financiere management : scope of accounting provist affinaire source of finance.
-outline of financial and cost account definition the purpose account , fundamental accounting transit from financial to cost accrost , classification.
- of cost controlling cost absorbing factor .cost miscellaneous overhead absorpty , overhead facially ..
- cost account system : process casting batch costing hybrids costing ststt organisation for labour orgat for material cost organisat for overhead ..
- method of casting and control : marginal costing decision .
- profit and efficiently and loss measure capital expendy decision .
- statistical method :
Chart and graph statistics quality control .
Designation experimt time Serie published statisic..
- part ,five the industrial environments:

The middlege to eight center the industrial revolution from development of large ..
- principal development in some ,major : coak iron and steel engineering textile chemical and artift fibre ,scienty research..
- the economic ent:.demands and supply cost of production types of compety resale price maintenat the general economic situation.
- general principles of financial and visit low banking and finance trade credibly commerce the merchant bank and issuing house hire finance industi and commercial Indy corporation for industrial negoy instrument.
- government and industry: introt devet of govert organisation of control .
- necessity for government control :
- element of legaj system : the low modern communities source of low common low system Englanders and Wales legal person the idea and property.
- general princiy : of contract princt of contract and commercial law ,contract ,tart liability for dangerous premise agent sale good , miscellaneous commercial low matter,
- elements of industrial low apprenticeship contract of employment factories act Offit premise ,act social insurance industrial arbitration industrial relations general managent division function ..

- explain award bid clause ,price industrial minimum salair ,flow manufacture process lighting tube.
Design process:
Order ,item price : product case

24. Explain: pratical school regulation and irregularity
Vocational guidance theory and practice:
-1 vocational guidance ,
-2 explanation: psychological explanation of occupational trait and factor personality development , social learning ,decision making autonomy,
-3 explain sociological explanation of occupational ,choice class gender ethnicity group , opportunity structure an interdisciplinary framework.
4- explain , the interview: philosophy, structure questions talking silence , listening ,non verbal communication information and advice.
- 5 , explain traite factor client centred , psychodynamic, behaviours problem silvt , fantasy,the place of counseling in vocational guidance.
-6 Career Education: explain objective: structure and occupational information the curriculum evaluation.
-7. Test interested questionnaire,self help instrument computer based guide special program

- re written career guidence ,total faculty subject total grad time table Admi total grand reason career .
-explanation: study of occupational ,self study of occupational.
-qualification obtained your present position how college.
- how to choose career,: knowledge of occupational finding about occupation , know yourself.
-how to apply find employment,way find .
-how to apply for work .
-how work relationship, introduction, different kind ,your concept relationship ..
- communication ,danger
--explain , psychological test : instrument , mechanical and technical aptitude.
-qualification| work do to choose career
- occupation | social conduct , relation social .

Psychometric
-Personality and aptitude profile confitial psychology
Name :
Interest ,| attitude | verbal reasoning , vocabulary ready completed| factor | personality
- test results reported | survey councillors .
- profile / v(y) ,,
Batteries ,

-explanation tpm is profitable,direction in production achievement zero breakdown the parko factory.
-RPM challenge limits from four devet stage , definition and distinctive features Tom striving for overall equipment effectiveness tomb,defect prevention system ,between , Tero technology and
-explain: maximizing equipment effectiveness , equipment used at half effective.
- breaks motor stoppages imped automation stop acceleration the deteriore of equipment.
- explain preventive maintenance alone cannot eliminate breakdown five counter measure for zero breakdown.
- unlicensed operational of automated equipment errors equipment investment, five tpm development.
- organising for tpm implementation the twelve step .
- step ,announce top management decisions to introduce tpm ,step 2 : launch Education companies.
Step 3 : establit create organization's promotion.
- established basic Tom police and coak .
- formulate master plan for tpm ..
Tom , implementation,and stabilzat.
Step 6: hold Tom
Step 7: improve equipment effectiveness.
Step 8 : estabt autonomous , maintence prograyfor operational.
-step 8 set up schedule maintenance program for maintenat.
Step conduct improve operation and may skills ,step initial development equipment management.
Small group.
- integration small ,small group goal coincii with goal ,
- evaluating the maturity of small group acty the functionalite of top many in small group .

25.Total maintenance product,,meeting police ::

-explanation: director social worker practice theory and skill,
- explain social work,an overview.
Direct practice domain phylosophie and roles .
- overview of the helping process.
-explain operationalizing cardinal social work.
- relationship building skill community with emphasis and authentic.
Verbal following exploring and focusing skill,eliminating counter productive communict patterd multidimenst assessment,
- assessing intraperst and environmental system .
- assessing family function , forming and assessing therapeutic group,enhancing motivation,with involuntary and ambivat client,negot goal and formulating contract .
- change oriented phase ,planing and implementation change oriented strategies.
- enhanced client problem solving skills assertiveness.
- modifying envit developing resource and planing ,.additive emphasis interpolation confrontation ,managing individual famili and organizat barrier change.
-the termination and evaluation phase ,
Explain : final phase termination and evaluation of code ethics,timing and intensity ,of self disclosure.
-A paradigm for respond authentic stimulation client message.
-Fuel for authentication response.initiated by practionner.
- positive feedback form of authenticity response .
- relating assertivei to client saying no and setting limit,
- exercise in responding authentication and ,client statement model resnse ,in surface underlying feeling , answer to exercise to discriminate level of emphasize response.
- explain: verbal following exploring and focusing skill , maintaining psychopedagogie contact with clients exploring problem.
Verbal following furthering response ,paraphrasing response,open and closed end , responding,client statement,seeking concreteness ,modeled response , summarise response analizing verak following skil ,
- focussing ,a complex skill selecting topics ,exploring topics depth blending open ended ,empgic response maintained focuy.
- evaluation used of focussing , response ..to exercise,answer to exercise identify in close and ended response ..

-explanation : eliminated counter productive communication patterns: impacts of counter productive communication patterns : eliminating non verbal effecty communicay culture nuance of non

verbal ,other inventory of non verbal patter of responding
-communication barrier eliminate verbal to effectively,gauging effective response the challenge of learning new skills.
- multidimensional assessment, critical role of assessment ,
-assessment an ongoing process , assessment as product,include strength in assessing,sources of information verbal report.direct observations of non verbal behavt observations interatclient monitoring collateral source of infot.
- psychologi test ,
-computer assisted personal experience based on direct interat.
- the importance of self awareness.
The multimensionaliry of assessment.
-the problem identify the clarity ecological factory assessing devetneed stress association.
-key factor to be addressed.
Manifestation of the problem, participate

-explanation: source of information verbal report.direct observations of non verbal behaviour, observations interactive.client self monitoring,collateral source of information.
- psychological test., computer assisted asssessor personalite expression based on direct interaction.
- the importance of self awareness.
- the multimensionaliry,of assessment,the problem identify the clarifying , ecological factory assessing development, participants and system implicated in the problem how participate. , development stage and life transitions.
- severity of the problem meaning client to problem.
- site of problematic behaviour the temporary context of problematic.
- frequency of problematic, possible alcohol, substance.
- child maltreatment.and spouse abuse .
- client emotional coping effort skill strength and skill of client .
- cultural and social class factor questions to be answered assessment other factors .
- assessing interpersonal and environmental.
-the interaction of multimensionaliry humans the intropersystem , biophysical characteristics presentation.
- physical health cult factor in social support , assessing use and abuse of , alcohol and drug , effect of abuse alcohol dual diagnosis in , biophysical social , using interview skill to asses possible , alcohol ,using instrument and procedures assessment .
-assessing abuse ,use of instrument and procedures ,conveying assessment finaling client.genetic factor psychiatry.
-cognitive , perceptual , intellectual judgement , reality testing, cognitive flexible ,value misconceptions, concept, interaction between cognition emotional and behavioural,
- emotional functionalite, emotional controls ,range of emotional, appropriate of affect ,assessing effects disorder ,bipolar effective, bipolarity ,assessing social,.- : motivation: precipating event and motivation,in volunteering client ,culture norm , different, determined pattern degree of acculturation , bicultural and mental health ..
- fluency with language problem solving , achieved credible, providing immediately benefit attitude ward , environment health and safety factor environment resource universal need identify relevant social , system social support system .
- negative social support system assessing reciprocal interactive between individuals , instrument to , environmental need of disabled.
- assessing family function the evolution of family system.
- system framework for assessing .
- family functioning , family home , content process of interaction..
- sequence of interaction employment circulum explanation , assessing problem.
- outer boundary internal boundaries and family subsystem family power structure , family decision making , family and range feeling ,gosk , family myth cognitive communication styles of member ,
- forming and assessing therapeutic group ,classication of group formation of therapeutic,group established group purpose,Agence and practitioners perspective.
- established specifications individual group goal..
- conducting preliminary interview.
- group composition.

-open versus closed group ,size frequently and duration meeting.
- voluntary versus involving ..
-assesin group process, assessing patterned idify group alliance , group norm value ,
-enhacing motivation with involved , applying concept from social, initial contracts structure of initial interview..
- using confrontation facilities.
- negotiation a problem search bargaining with clients getting mandate off your back ..
- exploring self defeat consequences,resolving ambivalence in family creating incentive culture hope , highlights strengths modifying cognitive self .
-negatiatinf goal and formulating an rational contract ,purpose of goal ,type of gosk , guidelines for selecting ,process of mutually selecting ..

-**26. labour relations in education .**
- termination for labour in education
- act and bills for labour low in education .
- explain: an historical, clarification of concept the development of labour ..- the of exploitation racial discrimination,
Explanation: era of advertisement ,the era code termination and cooperation.
- development of Education labour relations.
-sources of labour , labour relations and the constitution.
-the common low and labour legislation for Education.
-the rules of natural justice.,
-the contractor of employment,labour relations act and related labour low.
- labour legislation for Education
- individual employees relation .
- defining employees and employers in education.
- employees right of employment in education,
- employees right of employment in education ,
- fundamental right .
- duties of educator as employee .
-dumie of employees
Skill development and Education ,national skills authority ,seta for Education,
- learnership in education ,
- collective labour ,freedom association, organisation right of trade union ,.
-collective bargaining in education,collective agreement,managing industrial action strike and lockout.
-responsibilty of manager ,
- procedure during strike ,duties of manager , established and implementation..- fairness in workplace disciplinaire:
- substantive and procedural fairness,fair unfair dismissal , progressive disciplinaire ,
- workplace disciplinaire Education:
- incapacity ,poor work performance,defining poor work, procedure incapacity, health injury , definitely health

...

29. Explanation :
- Principle of commercial low :
Large credit ,agree small intermediary,
- explain: size of agret, regulation, concellation of registration of credits b,
- registration of definitely counselor credit .
- consumer credit policy.
- source of the low , statutory low or legislation.
- the constitution .
-the customer low,judgt of the court ,old authority , foreigners low , case discussion.
- the court in republt t constiy court ,
- the constitution court .
The supreme court appeal ,high court officer of superior court duty

- officer the supieur court duty process master .
- magistrate court .
- doctrine of store decision ,Cree case create judg .
-application of the doctrine :
- interpretation status : the relationship bet the star decision rules the general principles,
- court judgement : ration decides .
-:the term : low rules ,meaning low rigth, legal subject legal objt, intellectual,private low , protection , servitude bself defense provocation .
,- term of the contract : essential natural and incidentally,condition ,penalty
- contract of sole: the our,chosen is entitled to be protected by seller again b,for content ,
- indemnity insurance.
- determinat of the amount payable non indemnity insurance ,value house ,.
- relation diffusion form intellectual,
- franchising : mediation, arbitration,award
Statutory arbitration,source of the low of arbitration ,matter excluded form arbitt ,national cause ,matter relating to ,criminal case ,validity of arbitration agree ,the arbitration agree ,the power of court in relation to arbitration agreement,stay of legal proceeding where there is an arbitration agreement appointment of arbitration,power of power of partie , appointment of arbitration ,power of partie to appoint arbitration to fill , termination of an arbitration ,
- notice of proceedings partie , summing of witness and recording , evidence manner of arbitration award the act ,time manner and publicat of award refused to sign must does not invalidate order specifications,setting a side of award ,cashing of cheque,the relationship between card ,issue and card hold traveller ,the low of trust basic feature a ,trust transfer control ,, right consequences of windings the effect of windings, liquidation meeting land proof ...- the low of administration of estate ,the executor ,appoint , furnished of security removal and dischat ,master , preliminary work ,death notice , letter accept ,band security ,making over in space ,completed sell , redistribution agreement payment to creditor on brief

30. Explain: practice school management

- management characteristics of management styles the main components of .
- planning: explain planing cycle different level of planned the need for planning policy general guidelines for effective plan
- explaun : step decision making ,routine and innovative.
-explain : time management the importt plannit way in which time is wasted making effective .
-explan time table drawing time variouse , drawing up time various types of time table ..
- the annual programme , purpose of the annual progrt consii drawing,
- plannt preparation and record and keeping.
- culture activity in the debat society youth activities religious movements , competition.
-explanation sport actuy ,the aim of school ,sport police,
- basic requirements for successful organisation and control , organisation of sport various.
- the education value wells organised .
- Education execurssion
- officii applit for sport.
- officit applit plannit and organisations, number of excussioner ,prior asssssmt ,follow up teach.
- follot up after .
- teacher and human relations ship ,teacher and authority ,teacher and the princit, teacher and principles,teacher and colleagues,teacher Nd pupils teacher parents ..
- class organisation and routine .
Definition of class room management.the relation between teaching class manager ,
- the important of classroom management.
-element if classroom management.
Organising the classrt to create atmosphere for learning developing an effect classroit routine.
- furnit arrangements changii classing storage and stirat facities..
- laboratory organisation pratical work .
Grouping and teaching.
- the structure Education department,head office advisory council for Education and training, regional control , circuit area office board of control ,board of many ,school committee hostel board ,parent teacher .

- type of schot secondary school ,special school the .
- explain correspondence and filing system:
-the prescribed filing system ,subfiles ,
Directive regard mail ,register
The school journal ,the visitor
Matter arising from incoming corresponding.
-explain : in service training: in service training for staff development aims the in servit training.
-the task the principal: substance a travelling allowance
Decentralized in service training role of head office in service .
- delagating :
What Delagaty means ,who delegates , in the school , difference bet ,the of delagatiib .
- - co ordination : co ordinating teacher work ,subject meeting , coordination pupils ,
- performance: perfot appraisal performance appru , performance effective common value ,reviewing and analyse career development.
- staring equipment,storeroom ,stick keeping teacher in charge ,papper order book kept number item ,
- safe check labo rules maint conductivity head office directorate ...- responsible post school ,power durie .
- didactt oriet instruction and learning ,
Didactic principt condition ,the currit ,aim of the currit ,the selection and oral,(arraignment of learning ..
- dudacting method and each ,lesson presentation evaluation ..
- defining didact science pedagt ,.- didact and other relating teach ,didacic .
- the didactic activit ,the didactic situat,general peadagogic andragific .
Didactic environment.
- tsxhook as didactic nature and structure ,task of the ,teach learning ,tertiary education institutions non firmaj cybernetics ,system theory .
-------_____
explain: activity guidance,
-explain : self knowledge psychopedagogie , decision making stage ,
- choosing partion,examinat,tertair Education ,social conductor ,human relationships,the work.
-need that can fulfied through work ,the career attitude towards.
- testing: questions such follot may be set nocturak pedestrian shi preferably.
-a grupe discussed: stlabutthem courtesy and road usage
-the educational objet:to orientate the pupit in the relationship between coutsey and responsibilities.
-the learning objectives:to identify the character of courteous road usage determine level .
- to accept a losit attit award the requirements.
- explain : solving problem : during the unlaxjinf of new mean of discussion teacher must si that follotbasic fact concerning courteous road usage trafficking.
- pupils Alfred have knowledge: steering : it is difficulties to determine the main character the relation courtesy and is not clear jointly lesson problem is formulated ..
- good maneee : unlocki new content pupils asked traffic low pupils matter how disret further points ,
- dunctt: characteristics of courtesy can applier motorcycle .. evaluation pupils completed self questions,@= alway, 2 = often ,seldom
- traffic ,control
- questions: wath is functt if a lesson objective ,his is lease object ,why is formulated of a learning objectives important in term minimt an skill level of achit.
- why is lesson problem import give 4 reason..-what us primary with demonstrate lesson ..
- wath is importy.
- during introductory phase of lesson them .
- which important prerequisite applies to group ...
-----_____
31. Life training religious,Cristian culture, art buchellor :
Explant: administration Guide master form
- explain spread gospel pratical
& Admnistrat Guide master form ,
- questt after asked about .
- introduction letter church member...
-suggested sheet adver,suggested 1st years scheduled (33 weeks ,
- application form admnistration,
-student address planer,

-recors of tests marks and exams ,paymet of fees register,
-attandance register , assignment register.
- order for code cost and note ,record of orders,
-certificate warding sample in cover ,
-bible school survey compus registraty.
-please take book apart except the last two sheet important documents read, certificate sample , certificate merited , certt Christian service ,diplome in Christ lead ,certt in word minister,licenciate in Christian ministries ..
----------....

-**32.explanation: marketing reseat the research process and problem .**
- structural eqt models ,neural networks,social net,
- analysis ,factor analyse ,cluster analysis.
-cass part , winscon power,stormt equt,canopy of core ,canopy production, food ,transitional housing ,picty word megabyt of ...- equipment,fabut
-research report ,fundamt criteria if form of report the oral grapt presentation.

- students guidence to office autimat : .
Office start four kinds of infot infirmat processt operational office ,procedure office system office,
- example of an office system designing and office ,system the impact of office automation on job.
-office automation hard ,
- computer and office how computer work disk drive,work disk driver input output ,device networks other office automation hardware.
-the electronics desktop,system siftt ,operating system task operating syst command .
- operating envy.
-recors keeping : record keet concept ,record keet task ,record keeping application type of record keeping .
- software .
- choosing a package.
-spreadsheets:
- spread sheet and database packau ,spread sheet package other spread sheet facitie and graphs spreadshtappli a..
Item loyal customer

te

- 32 explain: Educational the Mrs in time perspective.
Explain peadagogic and perspective history of Education development .
- orientation : Greek idea sophist concepts ,Socratic idea of knowledge the platonic concept ,Aristotelian idea on the infrastructure of Education ,the stoic Telos formula ,
- Roman idea , earthing Christianity ,media volbidea ,humanistt ide ,pedagy becomes ,pioneer of peadagogic founder of pedagt become science of historical original and development .
- methodology of the history of Education.: orientation field of reast nature of problem of research ,general methodict,post minded futt ,factuality individual b,open mind , Conte temporality , setting the regret methodology unrestrained complexity present and future ,nomothecity ..
+Professional competence personal enrichment.comparaison ,method approach,basic science method of investigation,them design field ,invesy of contemporary them , hypothesis formulation, investigation ,collecting data making , established information Education ,interprefinger data writing, approach for research, problem historical problem historical anthropology approach Mets bletic , history.
- explain : development of higher education in general.comment , concept higher education a time instituts history functioning ,modern ..
-explain college university criticism , justice.
- established ,some ..
- English education system ,control Education used ,aim content ,
- note ,the act preamble to the act ..some stipulation

Aspect of the provincial Education system :

- Education control , religious instruction,teaching medium .
- a natit Education dispensation coordination uniform in education matter , preliminary work for new Education dispensation ..
- policy keep with policy principles : change in some important Education matter , preliminary Education primary and secondary , division to schools course , the grouping of school , provincial Education ,
---
- **35 .explanation :General psychology low**
- the identification of psychopedagogie two ,
-method of psychopedagogie test nationalism the experiemental testing the experiemental method the clinak methods, naturalism observations testing ,the functy of theory test verification , modification form of modern theory .
- explanation of behaviour reductions, explanation pattern , psychopedagogie influenced school of psychopedagogie present phylosophie
- motivation , : explain motivation questions acquired classifying working .

- biological energy recurring need measure activai stimulus transaction
- discrimination conditions: other classically conditions response , instrumental learning and operant conditioning..-
- reward and principal of reinforcement three learnings situation narration rewards non continouse extinction, stimulus generation learner reward negotivr reinforcement and motivation.
.-learning : selective discrimination learning ,trial and error multimensionaliry learning..
- motor skills learnings motor skills task distribution of , transfer of training feedbay knowledge.
- verbal learning : general procedure verbal rate presentation vfactor some interpretation in verbal learning transfer of learning concept..
-cognition memory:
Measurements of two factor of retention,short term memory information processing memory control language, development, hereditary some genetic principle .
- maturation: patterns of development maturation and experience.
- some devely topics : perceptual development language development of intelligence development of socisk .
- sociality interiors change communication society ..
- consumer psychology: attention getting methods effective of advy other aspects of , structure,purpose
Personal patter animal socisk manipulation social acquisition.
-motion : emotional in history analyse Lyman emotion physiology functionalite, facial expressions.
- acquisition emotional: limitations emotional conditions, learning developing and maturation of emotional,theory..
-psychologicsl stress: selyes ,systt stress psychological stress psychomat.
Perception : receptor function:vision audition ,faction and skin sense kinds,
- psychophysic : detectsbily low sublimation perceptions scaling ,.-
- organization's : reception audition faction the skin equilibrium.
- origin perception: development perception at distance visual depth movement perception,sound locaty colour perception colour their...
- subjective color after effect illusion.
- attention : matter orientation Tracy passive stimulation select.
-attentiin analyse : neurological attention negotivr didactt listening institute , attention brief stability.
- conditioning : the learning concept classical conditioning ,temporal relation extincty recovered higer order classical response .. motivation ..
_____&&_&&
- learning and memory at school in
 Learning psychopedagogie persscpectuve perspectt components of the learning memory.
- model ,
- the affective level of the learning memory process sensory memory.
-the cognitive level of t learning memory process
Short term memory
-the normative level in the memory process long term memory
Long term memory epis and semantic memory why do pupils forget learnings .
- learning subject content school
-ainm ,learning model for subject content planning phase , planning and preparing subject content effective learn ,planing execution phase..

- step in the learnerinf process with reference to learning pattern level of drilling reinforcement and competency ,
-product phase ,level of proficiency,level of structure complex , monitoring the prodtphase.
- communication the teacher as the exponey Education in transition teacher communicayteach ,communicat process ,general process.
Communicator style noise ,
- Educationak medit for effective teaching media practice subject : teach computer in education class PC Education use for teaching
- learning purpose :.computer aide instruction single PC managed available and placement of teacher :
- social aspect of classroom practice
Communication classroom , emotional aspect authority flexibility.
- acknowledge of father people motional encounter ,transfer of value personal aspect distance.
- function of teacher task directed functionalite of the teacher the social emoy group .
- life orit: explanation competency life skill ,type of skill life orientation study research in respect.-
-role : of the the church in realisation the role society .
- the role of occupy life in the realisation of wath do emplot exception terrait planing for life skill trait.
- explain definition terrain delimitation,the desit of programmtfor skill training a primary or secondary,CVS develot ,life skill modej ,religit Education theory and lrat.
Agraindinf of the subjey ...-
- handling of pupils of :
Motional assisted..
- benefits the individual , orthopaedic they

_____

Explanation: teacing the practice of nursing a text nursing didactic th.
- nursing educst the phylosophie of nursing ,nursing educst .
-the scope of practice of a registered nurse .
- the scope of the role nurse.
- the scope of pratice of enrollment nurse .
- the independent and dependent of nurse ..the independent functy of nurse .
Phylosophie of nurse ...- the historical of nursing education outline ,:introduy , nights syst, amercain system ,conbtini.
- purpose : and object nursing education.: selected of Education object in nursing ,decide what student ,plan implementation plan , evaluation.
- authoritie responsible for providing education .
-regulatiin affecting nursi Education:
Regulation country council ,RSA ,training registration and enrollment ,types course a Aila le registration,
-- _----------
Safety health aid tools hand ,,,.
Education safety health occupation,security. ,,
...

Explain: what is pedagy importance of pedagogy in teaching and learning process ,
- what is pedagogy,
- what is the pedagy in teaching,
- difference between a pedagogical approach pedagogical technical.
- type of peadagogic,
- role of pedagogie,
- pedagogie is method of teaching in theory pratical understanding student.
- pedagogie in teaching in refer educator student lead ,LMS , construction.
- teaching quality of teaching, encourage cooperation learn , eliminate mono learning.
- pedagical technique ,a pedagogical technique.
: defines a set of action performance by the teacher in the classe for teaching include flipped learn learning computational thing and stepped learning it is more granular Thant .
- technological pedagical content knowledge understand of how teaching learning can participate framework an education.
- technologiCal pedagogical content knowledge framework integrating knowledge record.

_____

- Engineering pedagogie educating ,focus if view of engineering pedagy is the development teaching concept creation for the preparation of further Engineering leadership roles changing .
- explain problem base learning TVET engineering electrical,

_____

- explain ,educare qualifications has been designed for people love work with children be able growth development child phrase ..

_____

-explanation psychotechnique ,: system of actor training preparatory Deve theatre practical test measurement large verbal numerique ,test permis, suspension, permit v. QI. = Quotient intellectual ,age mental /age chronological
. recruitment test suit logic.
Is used to determine the degree of extrave Ce emotional stability professionalism ,as employment,is concerned accord board dimensions psychopedagogie.

-_____

Psychometric test : the main goal of an aptitude test is to ensure that a candidate passes the amount of skill and cognitive ability to perform the duties of job role the common skill set measure test numerical verbal and non verbal rea
...

39.Explain: pratical school , orientation industrial trade
Pratical nated ,
- promote standardisation in trade and industry is one the objective of council ,CSIR
-orientation industrial in electrotechnology.standard industrial draw and label gate by EIC system gate output,,explain neer
. orientation industrial : in electrical trade theory ,domestic appliances: type machine washer ,
,,- maintenance out replace element tasg ,replace ,stei pannej ,,
 - orientation industrial in plant operations theory ,chemestrt and chemical processing ,cellulose fibre material ,manonr,readrvcombustion fuel and thermal insuy,,transfer heat pump, mechanism , convection.
- orientation industrial advantage close cooperation compagny ,industry ,,
Functionalite supervisor control responsibility,the aspect to prevent is to teach workers not tact :teach work
Teach worker.
Discuss different between Education and training .. government instituts.
- a supervisor realise account organisation position direction tools ,,
- importance diRectiob stragie ,operationel ,,
- supervisor selection worker job tools need , employees training performance
- operator is need mechanical workshop machine operator for stocking material

- industrial orientation in trade electrical
Operator stock material orientation,
By protection ,heart, illumination.
Application , equation AC ,DC

-_____,_
-In dbe to isita project to teach workers
In dbe teaching worker training direction practice workshop dbe ..compagny corporation
City power Eskom : exam national DBE
...

Explanation , orientation industrial vs manage supervisor,vs management system information vs manage system information in education key challenge n
Career posting time table

counseling: trademarks industrial compagny trade theory license and trade pratical license. Orientation industrial
Teach sork disciplinaire work communication skill team study team operational discipline teach counselor assessment and facilitate team value
Journal classwork average score
Counselor statement ,by psychometric goal work counselor conduct misconduct coursework engineering
Counselor engineering studies creation Portofolio assessment,and planing by ruling courtesy low common .
In dhet ,,in DBE workshop technologie
Counseling project by orientation checking low outcome workers project isita umalusi electrotech EIC commissioner in job experience
-Minister creation secret arrested ministerial letter appeal step. Minister dhet and DST building infrastructure government system careers creation authoritie building creation, counselor conductor, complain compliance duty
Orientation industrial guidelines project workplace disciplinaire, questions number of task number job project marktrad licensed ,
-appeal release result irregularity,non accreditation school instituts research trade training to minister ucpd , development isita creating DST ,supplier profile , regulation,minister irregularity creating diploma technologie system DBE and recreating system backlog ista
Teach appeal low Education processing learn ,by abscent Clauseoffice ucpd record learner orientation ministers teaching students practice counseling orientation industrial and marking process presentation ucpd and DBE system was learn job in trainer training
.

- explain: isita project orientation industrial counseling experiemental

- pratical experiemental
irregularity assessment. back log ,,time table n4 ,,and time table n3 trade theory examination ..
Irregularite suspension 12month ,n4 rwiten final n6 ,n5 final examination,final soon n4 examin irregularity final
Examination assessment years academic final ,
-Level 5,6 framework qualifition letter no qualifications isita back log .
Irregularite: 12 additional information pratical process learner completed:
Management system information
Level 1,2,3,4,5 vocational principle police theory ,applied resolved
Orientation: principle
. information management system:
Pratical 12month ,18 month pratical subject pratical exam school .
Topics test n 6 ..
-in high Education subject assessment moderation project:
In dbe subject it orientation vocational guidance: outmark

DBE filing pratical Poe s
Isita project student make computer
Learning lecturer computer subject , orientation skill training computer system
- information system , :computer
- quest operating system ,display option control panel gives ,
- system tool data computer .
Option , change display ,system defragmentation display..
- uninstall program system programs feature ,, physical formatting Calle relative , ram room cache memory ,folder created.
- Process of converting or data into prevention b, software , fraudulent vpratice email personal information ,infects .
- format pictures style drop ,use ,,spread is opened ,insert formulae
.- appropriate spread sheet v.
- appropriate functy determinat the price contract router ..

- computerised systeme
Create a news set of name select file compagny ,
- compagny parameter , business
- word processing : create services invoice ,use Arial 12 pt , all ..
- leave two line space , key ,,
- unit and replace word megabity ,save file A,,fibre ..

- irregularity,isita project back log record complain subject ..
Assessment mathematics:
-Orientation industrial and trade mathematics :teach workers ,trainer workers supervisor ,standard measure

-Management supervisor, :mathematics
Computer system management

-geometrical, algebraic ,limited , dervide function
Prove ,radius area high calculate approximate change in volume: V= π.r.r.h
-use partial fraction to calculate b..
-determind particular solutions integration.
- sketch the graphs of , the area bounded . determine the length of curve , equation,
- calculate surface the curve , x ,y is rotated

Engineering ,orientation industrial: engineering physics
T# compression :
Heat heeded to bring heater ,
Heat gained ,heat lost
- electrostatics:
Power = w/t the amount of energy .
- heat gained ,atom , frequently ,the energy of each ,,thermionic ,optical
---
- electrotechnical : DC : excitat motor control obtat adjust,
Alternates
- power developed,rotor output ,,
Power input = rotor output rotor .
Energy

Industrial electronics ,transient ,calcul value resistance to allow oscillation ,
Transducers : standard current ,step ..
- ultrasonic x - rays and radii activt: the energy can transmitted the energy genert high ,
- electronics safety device and electronics ,regulator system.
-thyristor device and scr speed .
-,programmable logic controller..

Pratical industrial in dhet high irregularity regulation material project ,,
Outmark ..
-
Counseling: project
In dbe project workshop counseling
Management supervisor workshop
 engineering,isita record academic ucpd
Create diploma: certificate
Counseling industrial electronic electrotechnique mathematics ,in trade theory electrical ,material irregularity DBE disciplinaire 11month suspension marking progress .appeal minister
Pratical,
action take occured irregularity and complain address ,, qualifications subject: 18 month technology guidence vocational module.

Explanation : career vocational science ,, explanation low Portofilio.

The police introduction
- section Career orientation profile,
-selection process ; choose career answers.
-question reward live leave , professional answers occupation.
-student guidance counseling police opportunity,, career understand job sleep skill , duty correlation,
- peace officer preami,duty assignment case involy policing ,salary career allowance, duties securite function compagny invesy,older private police no longer existed replacement ,in function ,police minim case senior college orientation profile,psychometric , polytropic test college Deb employ , task physical , deduction probation life insurance, professional, listening ,career ,profey a matter an amateur career ,Unifor report ,court syst , division Pre trial paralegal ,,
- police officer entrance exam police measure the basic skill ,exN read word duty
-what is community oriented in policing range , innovation organisation police improve skill project build communy , procedure,practice , activities residents
...

Explanation: irregularity
Error test used for diffece between two independent sample satisfactory distributor performance:
-service ranking ×1 overall,raking difference ,d1=y1-y2.(Bid sum .d.d = s data analyse invest assot agreement irregularity and back log project trademarks nated in job ,step process respond , provisional tax payer and penalty , understand and late submission,file Portofilio education trade , ,maturity date Poe s social award student , coupon rate 14%,
 internet,tendered bid or submitting 12%, tendered assumed accepted ,(1009),I R 709 interested,pay + c / 100×d, 3609,c = rate interested order ,d= number of day , 60 day
proceed,R,1000=(1000×17,49,, denomination acceptance capital emploie, capital reserve resent taxation total assets liabilities balance sheet,manufacture
-pat total retrenct , provided tax liability,salary and interest tax sum tax norm tax tax free portion award , provisional tax ,income salary overtime , allowance award irregularity plug ,equal renumeration leave,less acceptance of quotation irregularity and back log .

40..Management administration industrial ,
- products maintence tpm

- H: rate of Quality products 98% ,ideal cycle time=0,8minute, f: actual processing time + j×g=0,8×400 t availability= s/c×100=400/600×100=87%
-(m: operating speed rde= I / jx 100+0,5×0,8×100=6,25%,,
- net operating rate = f/e ×100=(0,8×400)400×199+80%>
I: performance efficiency ,+ m×n .100 +×100=(0,8×4000+80%

-net operating rate = file + actual processing / operationek
-process amount × actual cycle to operating+ 400 item× 0,8 % availability,
Avat + operation time / loadshedding time day academic record and Pratical
-net ...
- time loading,400 Mon × 109+ workplace record accuracy,process running,planned down ,lost process ,time c- d ,, processing time ,, j×g operating time finished , external total, quantity processed ,total including losses memory , attander ,cycle , actually processing time

- time × idee cycle actual appears= 400 item × 0,8 Min /400,,
-ovarall ,,
- job schedule job , production planning and control schedule date issued , relaxation total,credit 0-4 Min work earned ,1080 per× 0,4+43 Min work Min available work of 100 performance ,432 Min ,, 432/432 days of work = 90 out ,100 performance,Orla ,% is over all relaxation allowance mode rate ..

B. Planned down time per day ,down time accounted for inhere proceed,
---
a.manning meeting +29 minute loading time per day.
A-B + 460 minute ,D ,stoppage loss per day ,break down,20 minute stop, 30 minute, adjustment -20 minute= 60 minute ,operating time per day
-C-D= 400 minute

,G
: output per day + 400 item file

42-Duty industrial trade college and industrial ,

- explanation ista project back log computer student make .
-document wallet project office , appointment documents access post ,
-docuy wallet registration form appointment office , register documents emplomy, information recruitment documents Wallpaper wallet information,database stationery documents wallet ,arch office ,office size mass .
- docuy wallet bank account ATM printer ,record book customer revie ,record registry I'd number system , documents wallet Portofilio job career ,
- database emploie system entry exhib ,
- emploie record trait job qualifications graduation training post advertised,
- I'd register for customer entry databy job post sale reward , programme logic control custy logiy system I'd programmation language database ..
- print I'd frame work student ,print I'd student information ,print I'd ,job duty post ,print task rosta ,price over time print labour ..
-explanation: to
-electronics digital analogic circuit:
input a,b gate yes = a.B
-storage : potentiometer coefficient resulted and reducing voltage integration by factor
(6/12(initial ,x= 6/12 chart capacitor input , output and gate
Inverter integral circuit dx/St,,6/4 ,13,,
Sum,integer,summat,difference,RLC
L.di/DT(R,,+2/c , integral..
-construction PC architecture design development: input unit yes mouse optical keyboard yes , card red,control unity memory RAM ,ROM yes output ,CRT didn't,CPU yes ,room ,yes I/o,year vertical ,8 bit 69 but ,64×#=655336,
-memkry systt.
-sequencw +3 yes ,0,25 yes ,a+b ,A,B rim ,
- row yes data ,yes gate output gate , transistor bibpolaire logic diagram ,static RAM ,select ,supplies logic ,
- booleen algorithm program read ,yes memory register , printer charge plate ,electrosty digital input ,character ,source ,Lazer mirror ,module ,ribbon tape supply.
- data memory time yes,
-128 sector memoire ,564 bit sector,
input output devices microcomputer converter serial data , parallel decoding microspacev,ram 16×16 bineray yes
-disc label plastic with write ed inde hold,
- sectaire track ,2,255 but logic process read digital step motor,
-ns ram yes ,ram yes ,ROM yes ,CPU semie conductor yes ,hard dic driver yes ,external yes flopy disc ,data 150 km to 12m,typical machine
-3 bit /5bit/ secret,000A,/AAA@/ load AC ,oo#B/BBB
- 00/ load output /001,001/

-pc specifications format : Intel core 7 , external 975@,3,3ghz ,Intel ,DX58SO motherboard ,6GB,g skill trident DDR-200 channel gaineard ,GTx580 sponsored by vertex ,wD 320 GB ,data iu hard drive ,Intel core ,i7870 ,Gigabyte ,P55-UD6 ,LG flatro ,a essential up grade components AMD,procedure,chip choice the starting dusk x 2550BEb, CPU ,,X4 , 646 upward faster closely processor direct conflict shoe improvement load processor specific benchmark 3 d tendered video encoder x 264 ,,
- graphic upgrade ,new little graphic card up date gaming phenomenon power × 2550 choice graphic card filled card up grade ,sub R1,500 udger choice HD 5770bigger to jumping performance Dx ,10

gaming word in conflict ,
- platform up grade ,CPU u grade path for LGA ,775 socket mother PC 3Ghz,core ,3500 CPU ,4 GB of DDR,ram direct ,x9 tessellation performance heaven ,,2,5 / frame per second higher better ,base systeme with sapphire,HD 550/#7
- upgrade to HD 6959
-ditect ,x 9 gaming perfot..
-one the card edge graphic tracker #gb , sapphire 5850 Xtreme ,retailing R2000 ,price complain 6 pin power connector which PSU hard physical driver installed benchmark away result disappointed ,3 marks improvement word conflict did manage ,lost planet frame wallet being ,R2000 ligth completed reliable,
- battery ,g ram ,slot ,#gb,systy memory sticks R150 ,ram benchmark
-upgrading memory and processor GB ,test window ,CPU the HD ,
-weigth components for the perfect budgy building , perfect machine
Mother board F#A75-M-R1.100, processor A8-3859-R1,300,,
-ram ,corsair ,4 GB,,:1600mhz-R1000
-graphic ,xFx random:HD6670-R1000,
-storage : 750 GB - R 619, opacity ,re R200,PSU corsair ,430w ,R470, chassis : cm elite 343/,
total :R5,369

Build test installation CPU Vital
- compot case layer CPU guard lockdown,add cooler and fan fixing bracket underneath ,screw holes fitting connect mbod,fit the ram : open the catch snai lock. Motheboymemory Chanel ,# and 3 operator,
 Hook connect ,2+4 pin connector to mobo ,the 8 pin EPs cable whichever,.
- test the company power that sucker uonturning , screwdriver,striking the balance corsair ,4 GB ,,1,600 MHz ,DDR3 ,liani ram share system,CPU gaming rate ,2,34 MHz ,and 1,600mhz case ,
- Pre the case bit ,atz mounting screws install the PSU ,bottoy cable module drop in mother remove CPU from mobo CPU
- test it still works connect cable case fab ,tech analysis:
2560×1600 screen Gami surplus frame ,R14,09 flashi ,CPU rendering performance.
- cindbonh ,R#1,

Test
...

44.Explanation:Technologie compagny:
Teasing compagny , requirements market technologie solutions customer product security surveillance network point ,
- mission : provide technology added value business provide quality products ,
- valeur accountability ,,.
- LCD monitor screen size ,22,5" , 6 viewable image size : 546,86 mm display area : 476.H,,,268,2,v).. mm brightness , typical : 300 CD/mm, contrast ,ratio (typical) 600000:1(DCR) response time (typically) 5 ms , viewing angles 170/169,max ,,
- resolution : 2920×1080@ ,60hz
-HDCP compatible ,yes ,input signal : analogy ,RGB ,,and user control menu entry image ration source up ,consumption power ,on < 49 standard < ,wall mounted ,visa 100 mm , mechanical function tilt ,5-29
- special features : touch key USB ,
- type Gori - 335 case type ,ATx Min ,case motherboard : micro ATX , external up (up to 13"×9,7), (p4ready)
- power supply: 400w Culp ,P/s with 22cm fan (20+4 pin socket ,775 ready,.,,5,25" drive bays : ,3,3,5" drive hidden , expansion slots: 7,I/O interfy USB × 3 mic ,1 spk ×2 cooling fans front ,80mm,×2,rear 80 mm×1, dimensions,(D×w×H): 410×182×425mm,M/t(cuft):1,73.

- print mount USB audio high green LCD fan external ,= 4,5,25" and ,3×3,5" internal driver bays ,4× 3,5" HD ,system board ATX form facty ,13"×20,5 expansion slots standard ATX material steel ,
- dimensions: 52,25×20×45 cm
- raid max modular cabling system durable , titanium mirror grade block wraps mesh cable to mention ,20 toal power connector for computer ,type ,ATX ,12 EPs ,22v maximum ,power ,fan ,135 m blue led ,PFC ,main connector ,
- rails PCI e connector ,2×6 pin ,,1×6+12 ,pin modular cabling support yes , energy efficiency ,up to 80 % ,over voltage ,
- network cable .
5 cabling : 500m,solid , 24 AWG,,0,5 mm ,pair ,grey ,305 m flex or solids ,to ,24 AWG,,05mm ,pair ,,cat 6 cable ,305 flex or solids uti,24 AWG ,0,57 mm ,4 pair Gray ..
- cable tester digital tester ,cat 5.
- toolkit ,j-059 long nose pliers (159,mm) by micro cutting pliers ,by ,339 cable blade trividr hyp ,5022 wire stripper , by 567 telephonic plier ,8 p8 ,/-45 punch down tape,2,mm knife , 539 soldering iron ,39 w cable tester tweezers ,125 mm ,crysty, tester , tweezers 225 mm , crystal, screwdriver,+- module plug RJ ,- 45 / 7 PC , PC plastt box ,315× 255×55mm ,crimping ,tool ,Rachel type dual crimping ,punch down tools ,walls boxry cat singltpart,45 key Stine jack , surface ,car 5 double ,RJ 45 jack ,carb ,
- connector ,boot sleever ,RJ45 cat micron connector , standard cable make female ,15 pin VGA,extenst available ,in 2,0 m ,,3.0,,m,5 / male 25 pin,,
- 1000VA/2000VA,rack mount ups,
- patch panel 24 port it cat ,5 a panel ,w,t back ,bar ,48 port cat ,5 panel ,,
- battery voltage ,24 VDC recharge ,8 hours to ,90% charger input voltage ,2# vac ,,
- or 220VA,, output,wave from pseudo,wave protection outshort city overload protection with current limiting protection ,659 VA line interactive ups ,auto restart recover , provide ovrlot protection size ligth,b microprost control ,proviy modem phone ,line surge protector optit , equipment input ,voltage , building DC start functionalite enable ups ,input commercial power range ,145 vac ,280vac,avr range ,265 vac , frequency ,59 ,z #0% ,, output commercial power, sine shared frequence AVR voltage , 229vac ,auto sensing transfered ,b gross weight ,6,2 ,size mm,D×w×H,,,, 260×96×135..
- data manufacture data security , securite technologie PC , undertaking ,self finger printing , maximum b,test winner , antivirus program,,engine ,anti spyware,antipising, systeme tuning, firewall,internet ,award technologie,double scan outbreak shield , integration block,file archive ,formal ,heurisy detectt of virus ,client security , manager server ,agent notbooj server memory ,, -
- Serie projector ,3 projection sysy ,3,LCD ,panel,2 lense projects , system ,resoloi was resolution..
_____&
,- adabase ,storage data, association, emploie..file edit mask array , more, systeme, session systeme, system data. Area program ,nucleus ,buffer pool / ,I/o
General,file control block field data space command is added , database,
Empl modification,leave ,,name ,title ,edit

-**Triggered: gitlab,/ GitHub /azure**

Issue test ..
-Triggered electronic elektor technologie
-Circuit microcontrol ,,
-Gitlab ,fail running
Issue kananga ,, Engineering tshingombe
Project ,commited contributing ,code source
...

tshingombe fiston <tshingombefiston@gmail.com>

Sep 16, 2024, 9:29 PM (5 days ago)

to **tshigombekb**, me

T

Explanation: asssessment task management system information

Back log isita : orientation police career

Pratical

Platform software engineer,policy data right met career ,detective career electronics engineering,detective met

Tableaux design analyse investigation research police forensic digital print report , intelligence felonies vector design source analyse report evidence

-

ID submission: 22255

Your :tableau blue print assessment results thank ,completing blue print assessment::

Find everything building action plan get started tableau kit collection resource whitin organisation ,creating data culture happen by flipping a switch professional:

- agility deployment monitor maintence typically,it led effort understand board technical requirements.

- capabilities agility ,low high .

- recommendations to building your agility capabilities,recommattiin to building server , understand hardware, network, database , application is first step in planning server installation.

Review tableaux deployment section , completed the enterprise architecture in the the tableaux blueprt planner .

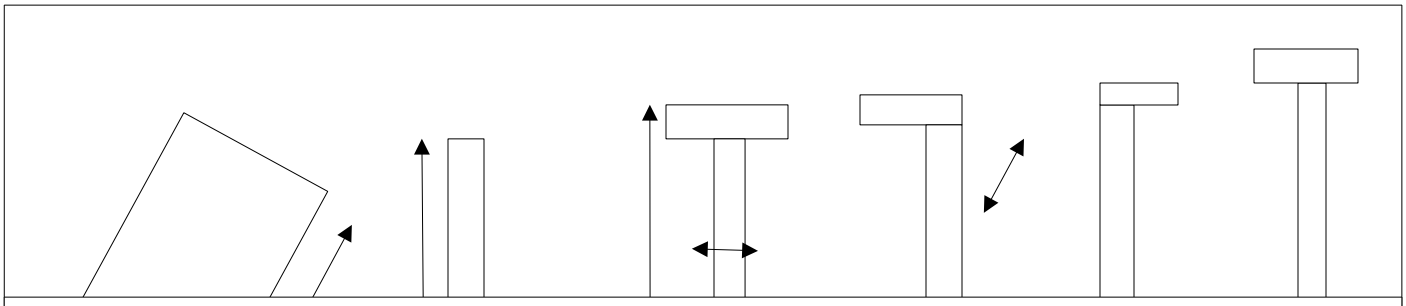
- leverage installation can tableaux server implementation to deploy authenty and details, configuration.

- manage tableau licensed: license be manage accordt softt license process allocating ,use changing tableaux analyi skill in trade , reclaiming available tableau licensed .

- reviy tableaux license level for the company.

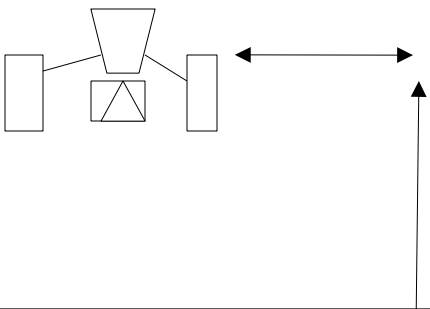
- deployed client software desktop prep builders,if virtual desktop determine want to manage license.

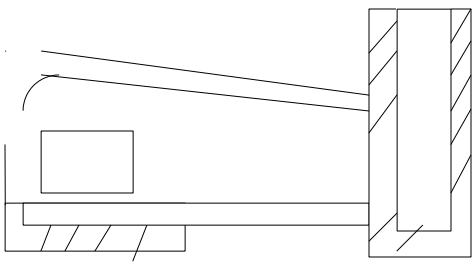
- monitor tableau server process status server process monitoring back group job runseever ,job include extra data slots admnise process fail so corrective action can be taken ,,

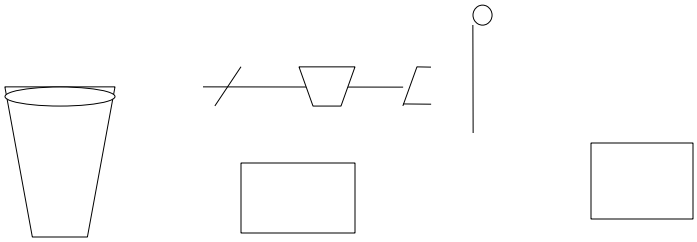


3oo degre , ore, coke, limestor, code refractoe ,,

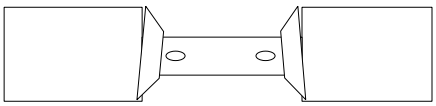
Small bell top large, refractory , cinder , blaste



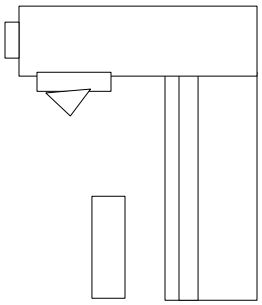


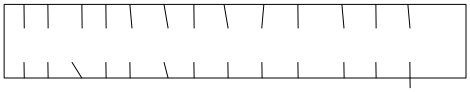


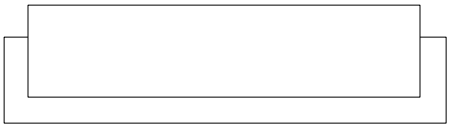
Cornicle. mold. bold.

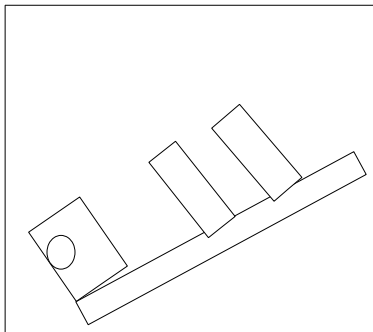


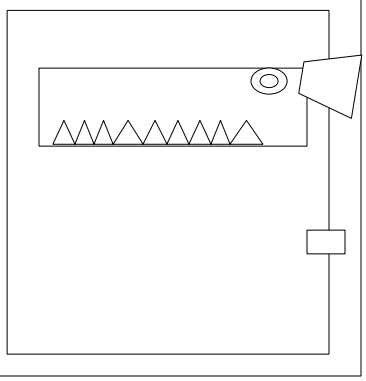
Rocket
test

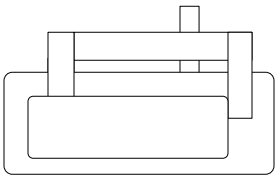


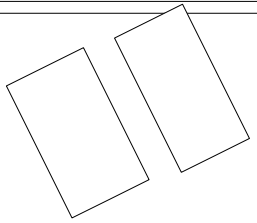




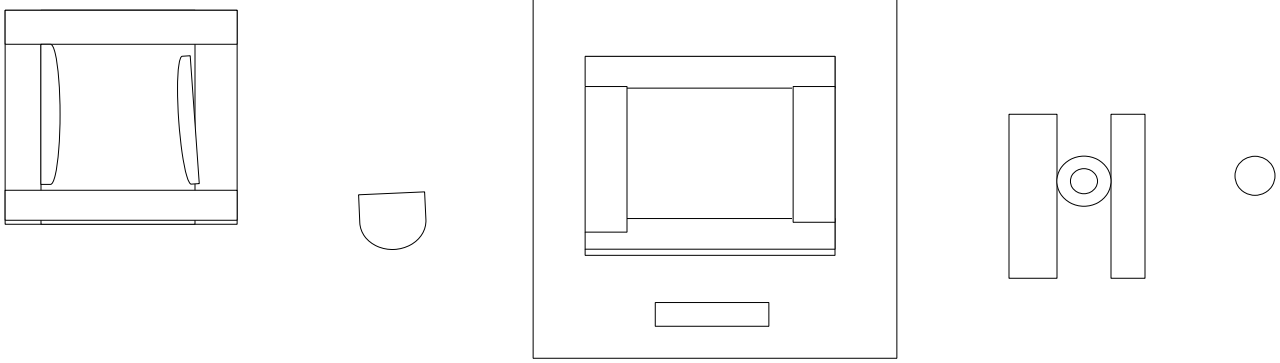






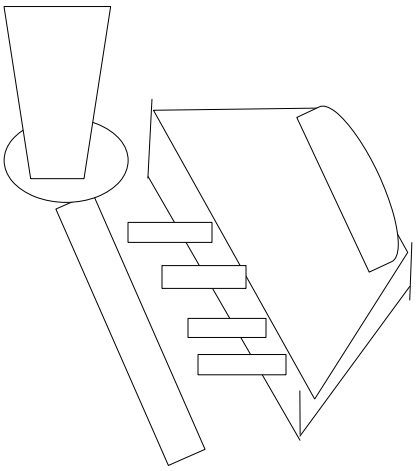


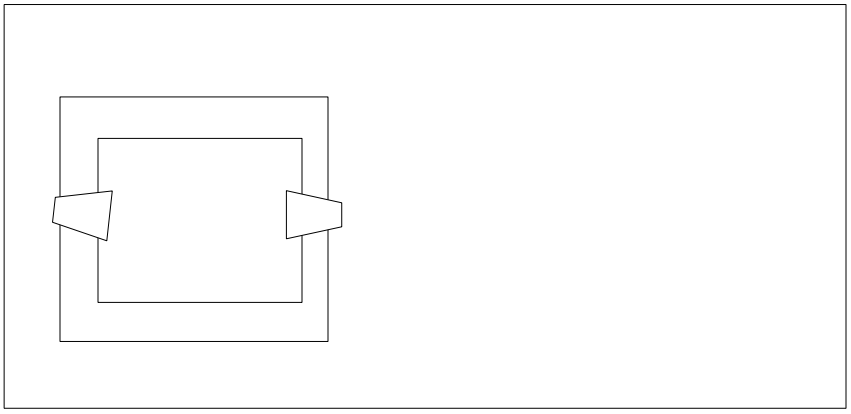
Firm chisel, wood joint , patter , hamer saw

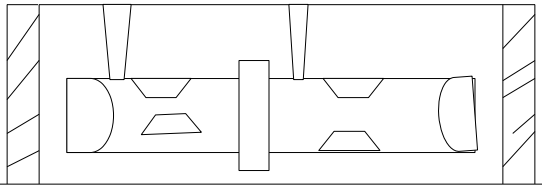


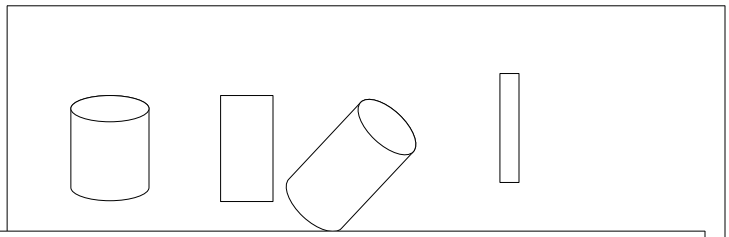
Core box, half core box, dump core box, dowel

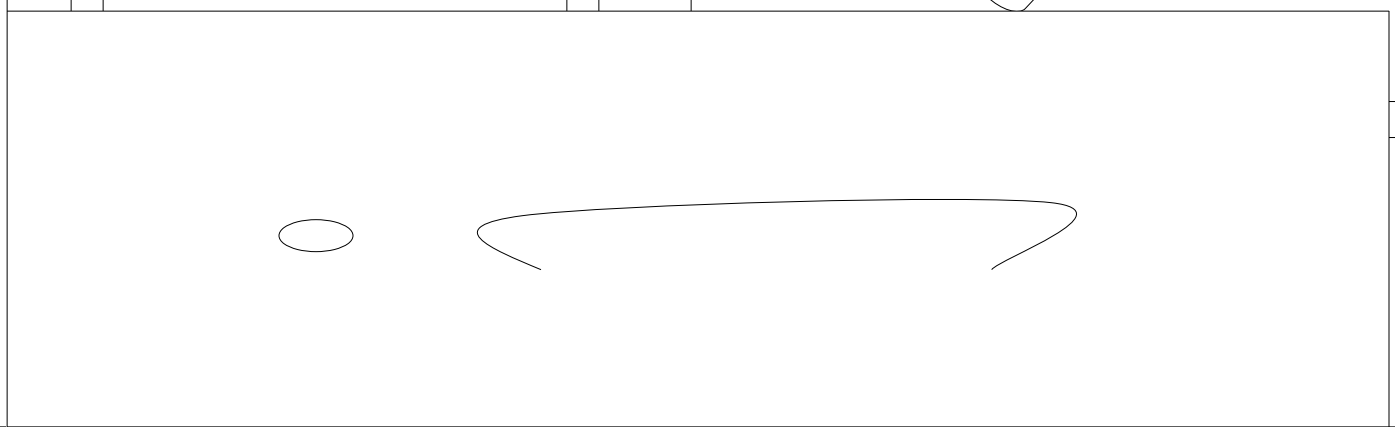
Foundry tools , ramer, open ,, closed rectangulare

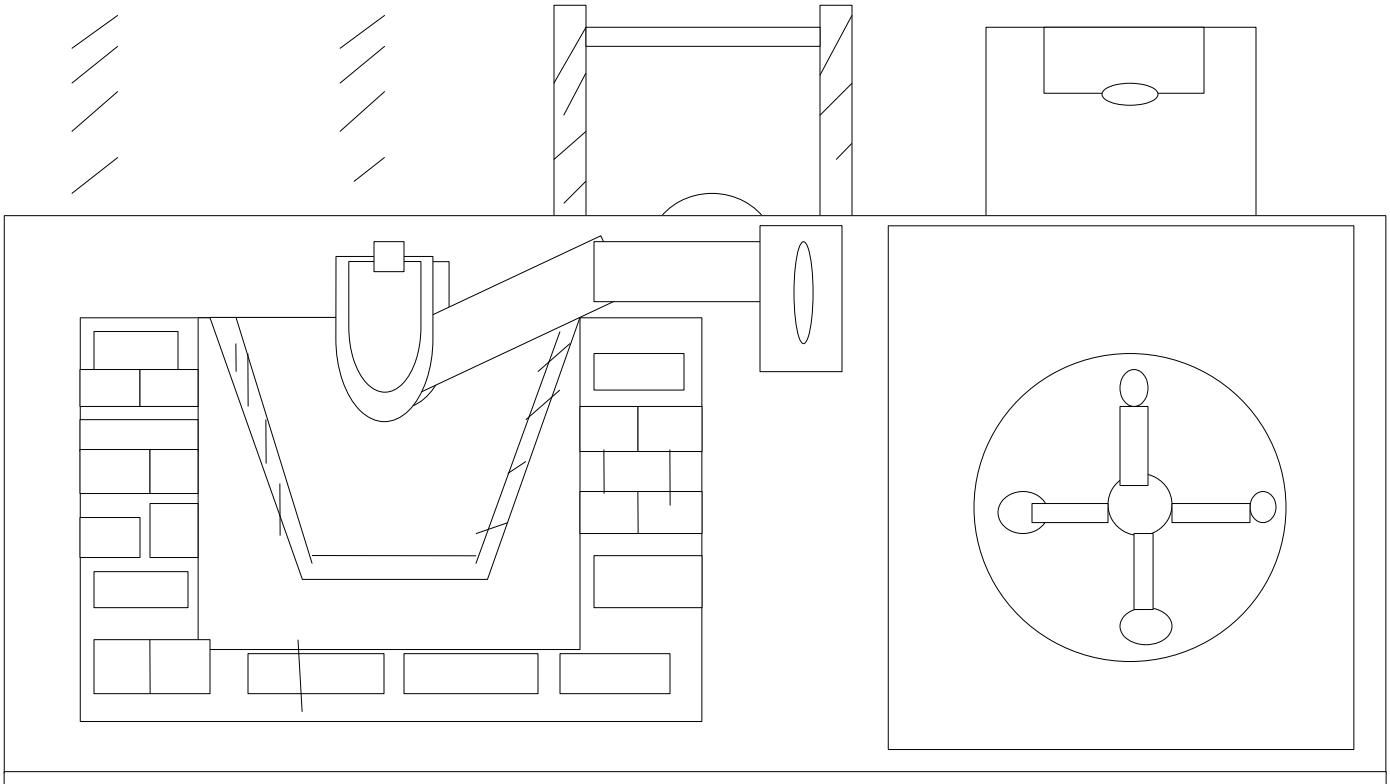


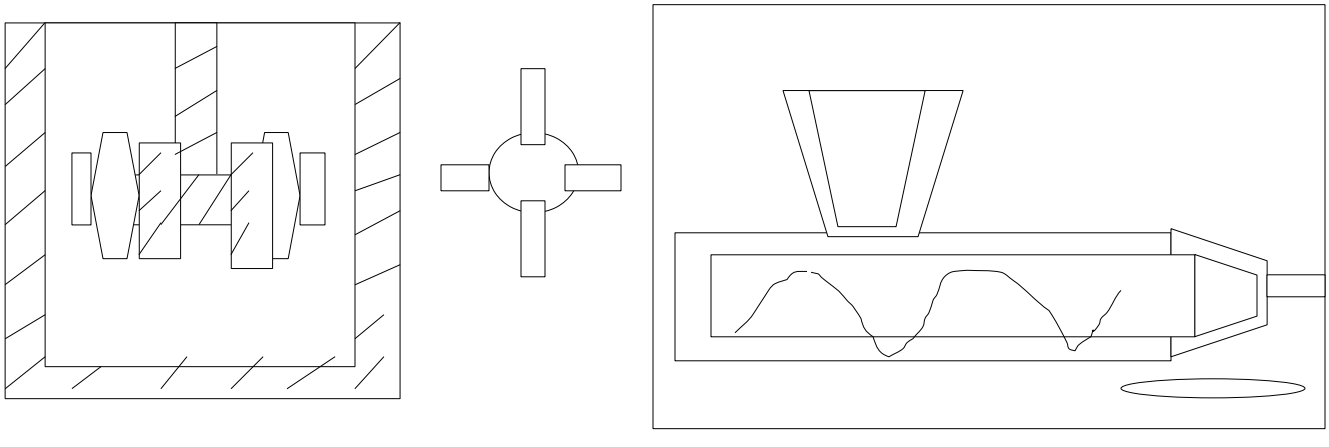


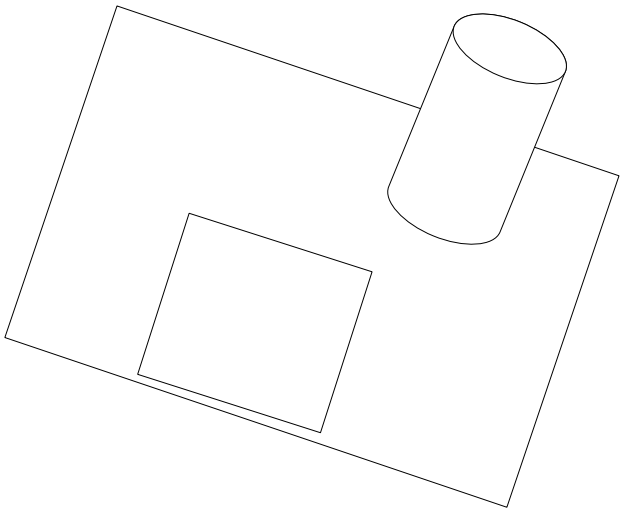


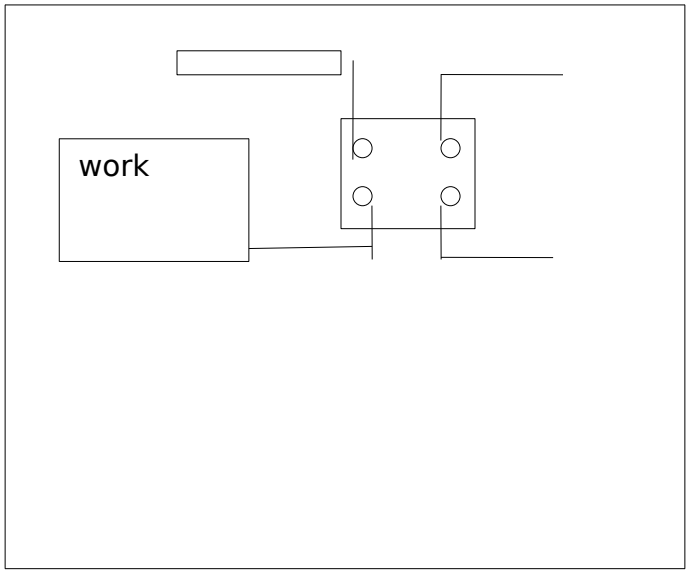


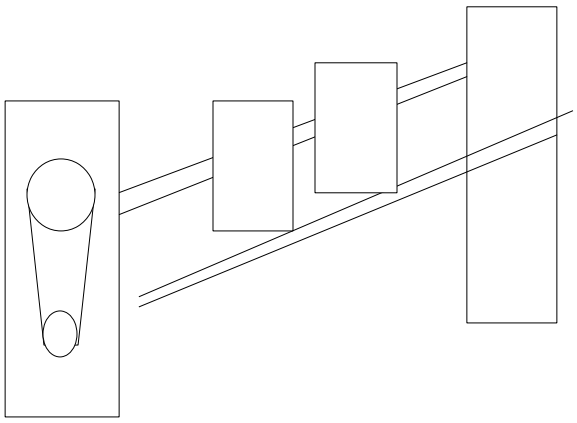


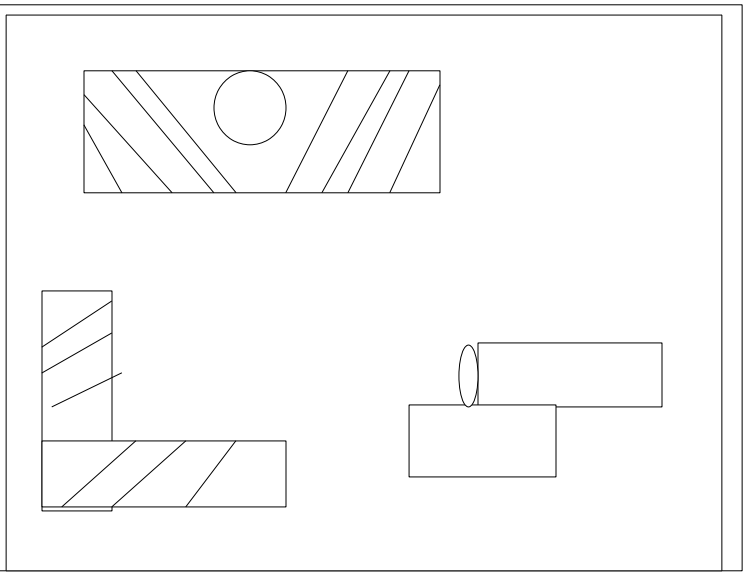


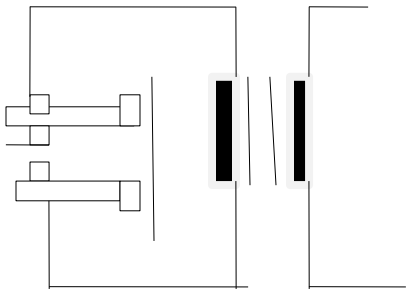


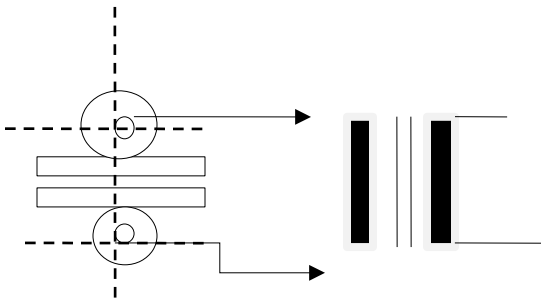


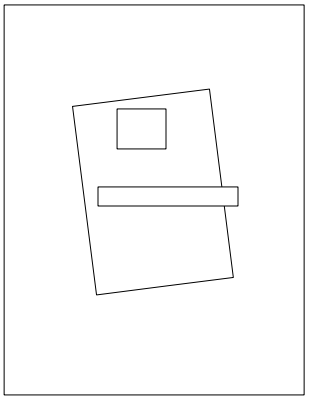

work

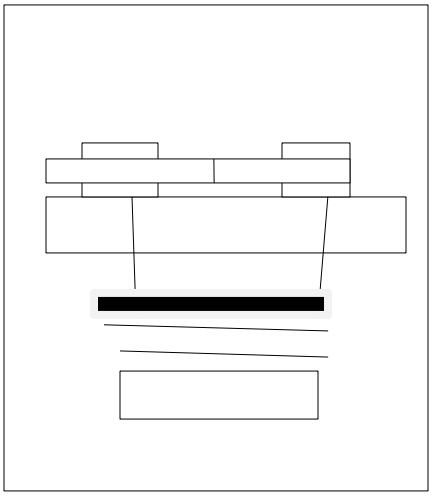


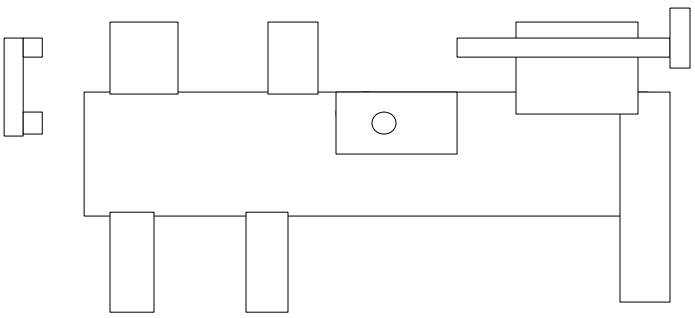


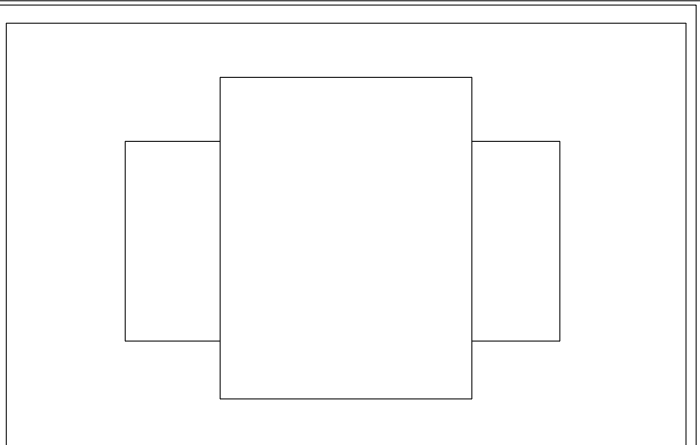


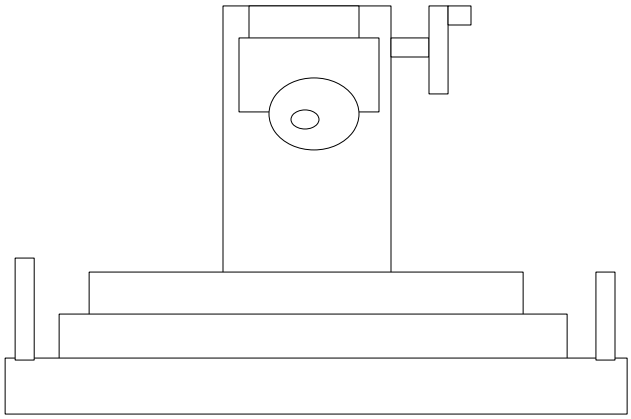


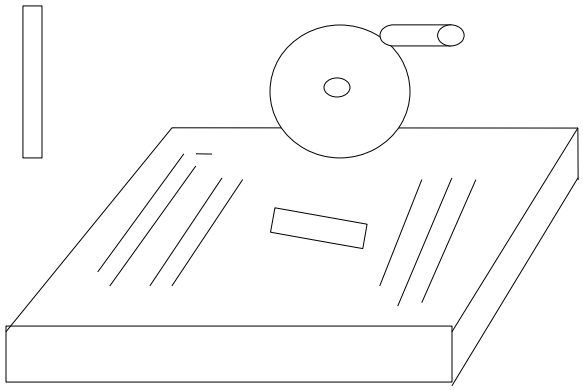


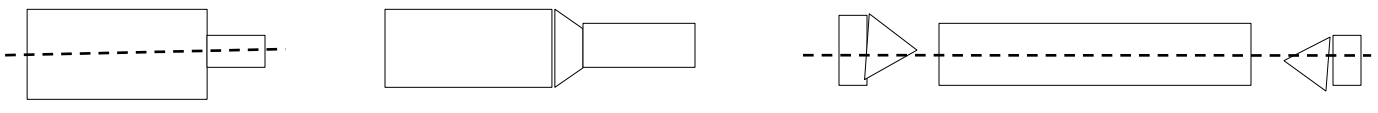


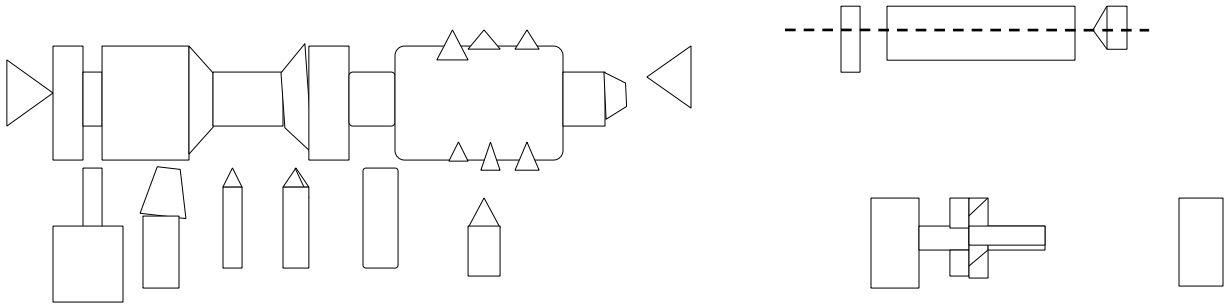




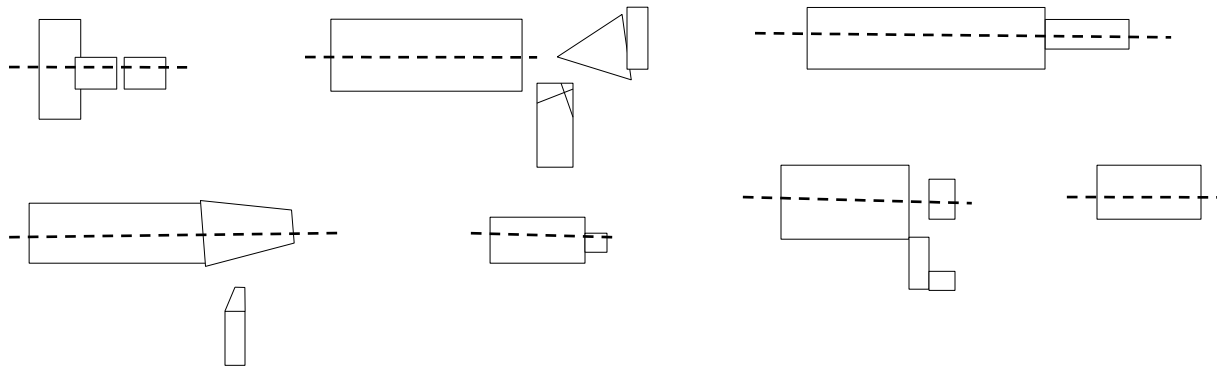


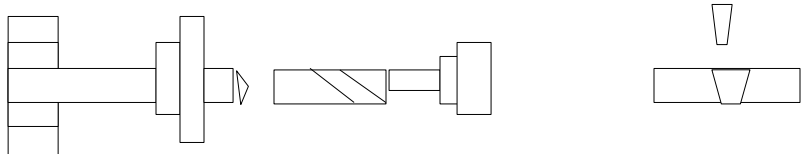


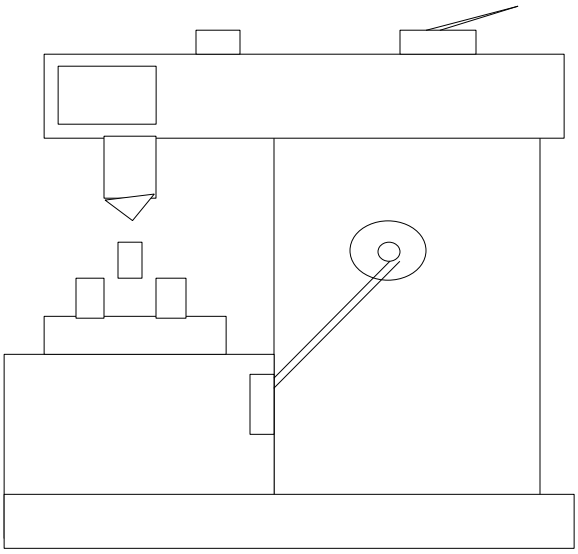


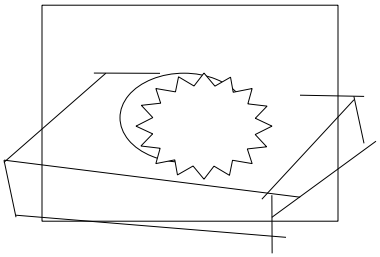


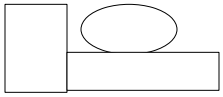
Orthogonal,cut,countour, discon chip, reaming ,boring, parting,righ,threding tools, chamfer

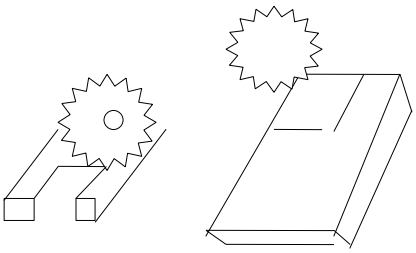


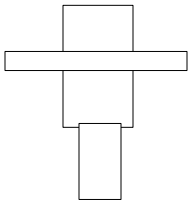


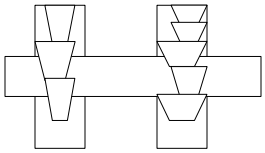


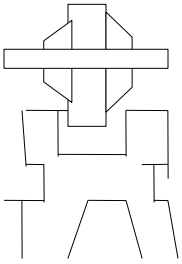


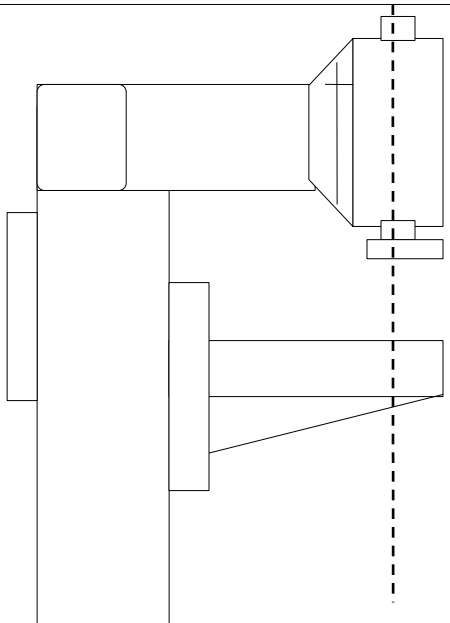


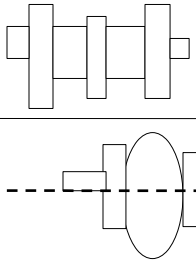


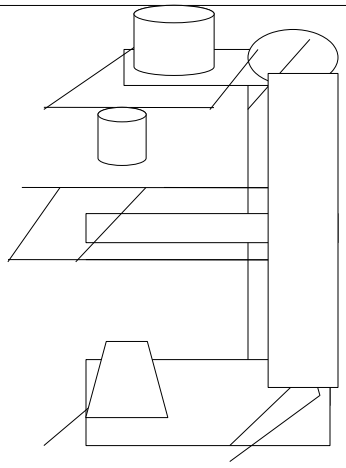


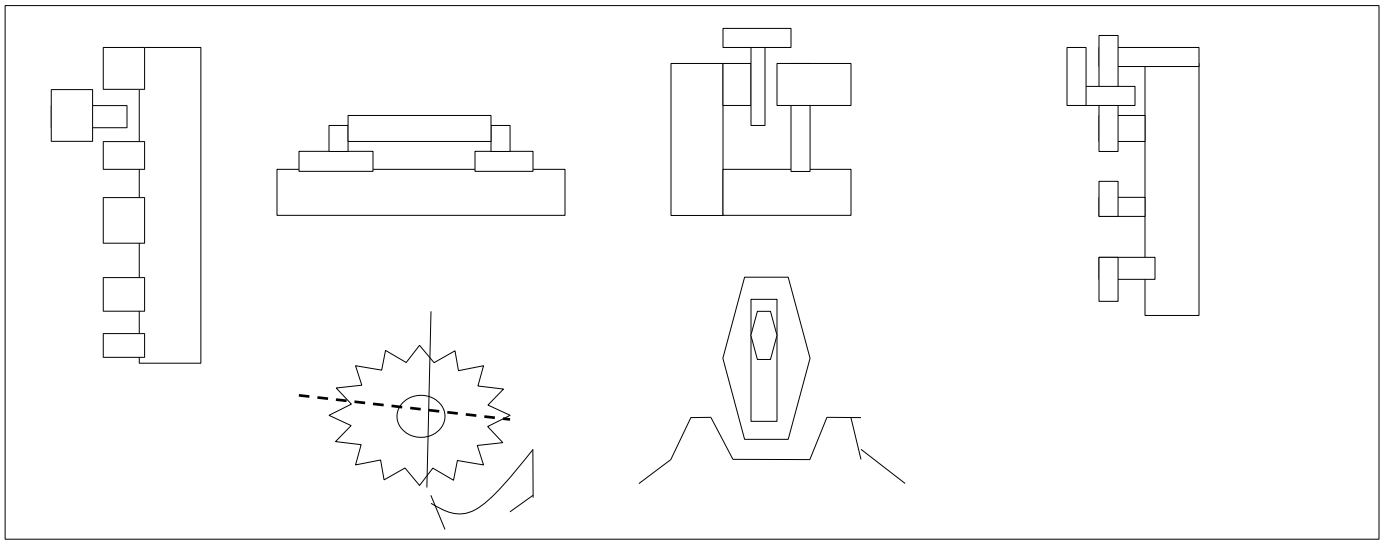


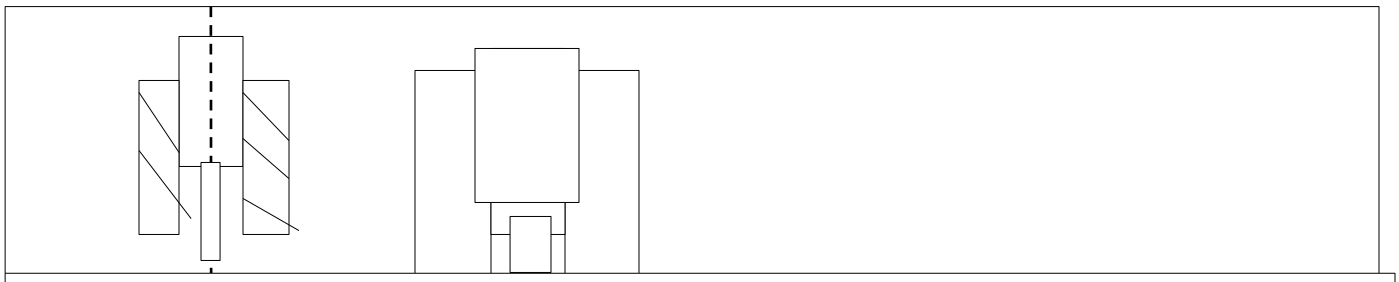


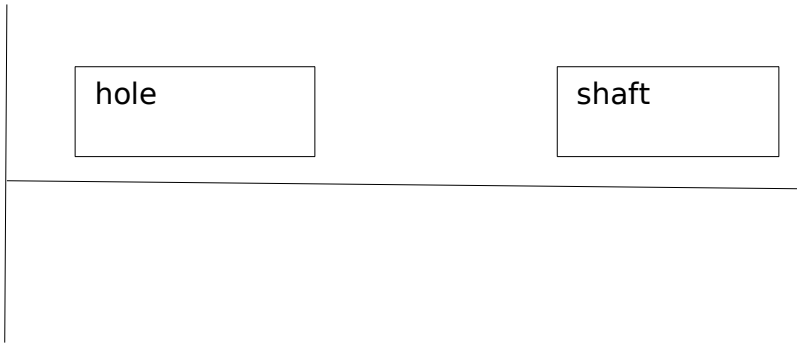


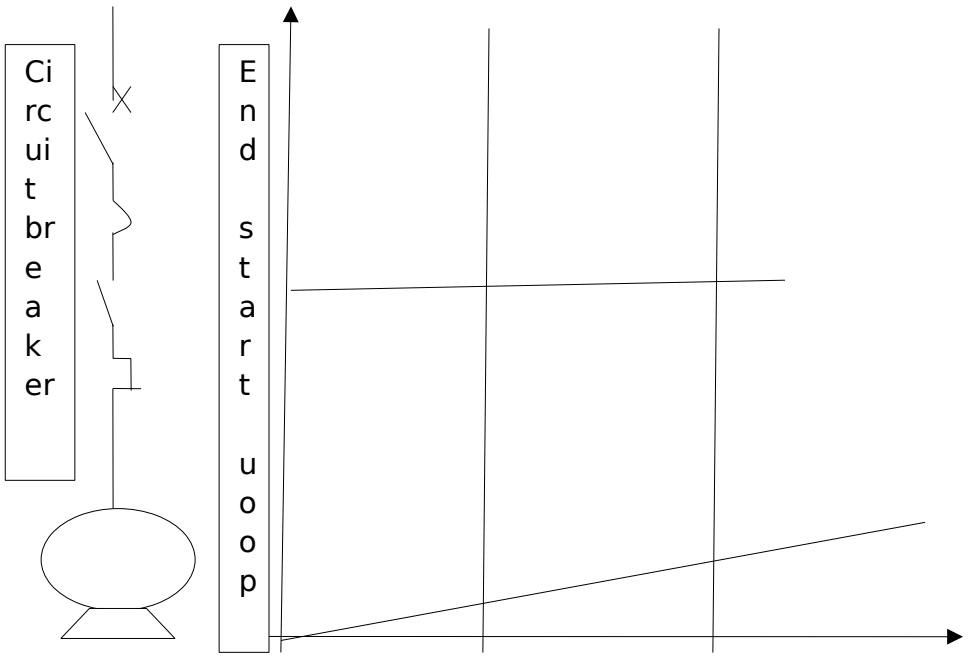




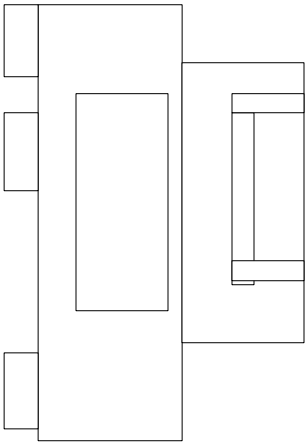


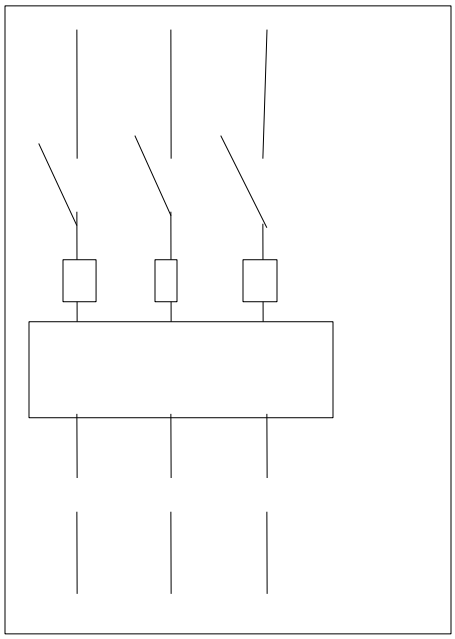



hole
shaft

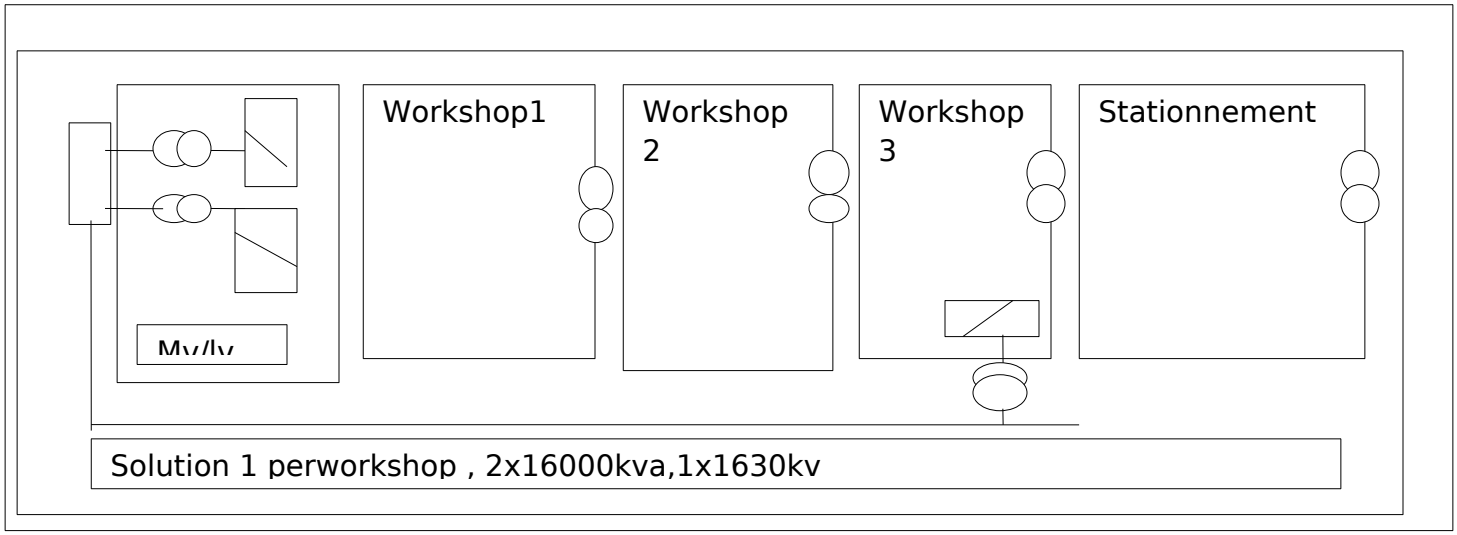


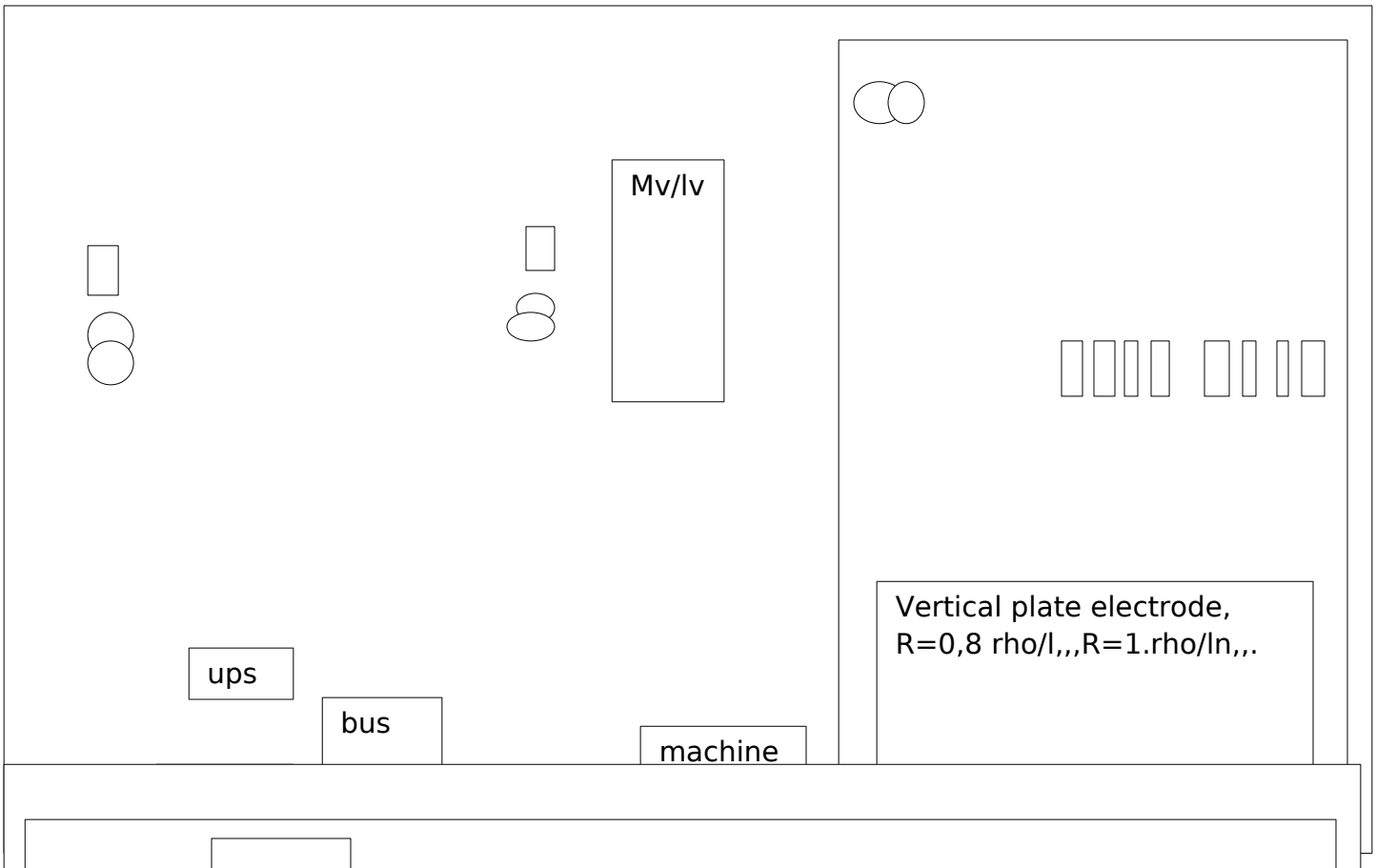
1,05 to 1,20 I nominal, operating curver of thermal , with limited thermal withstand operating short circuit

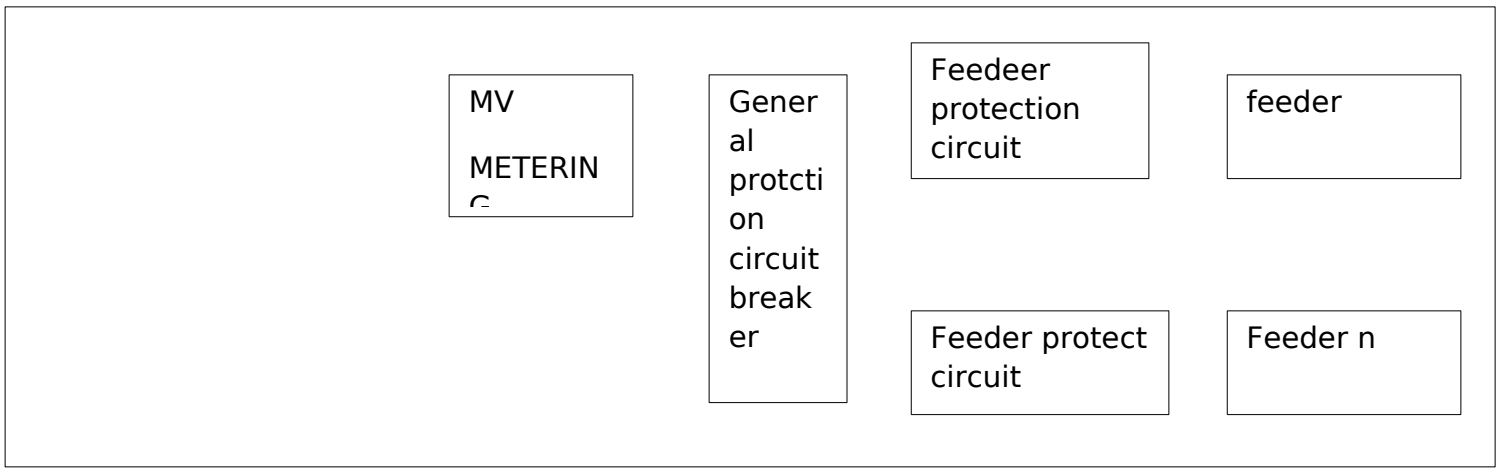




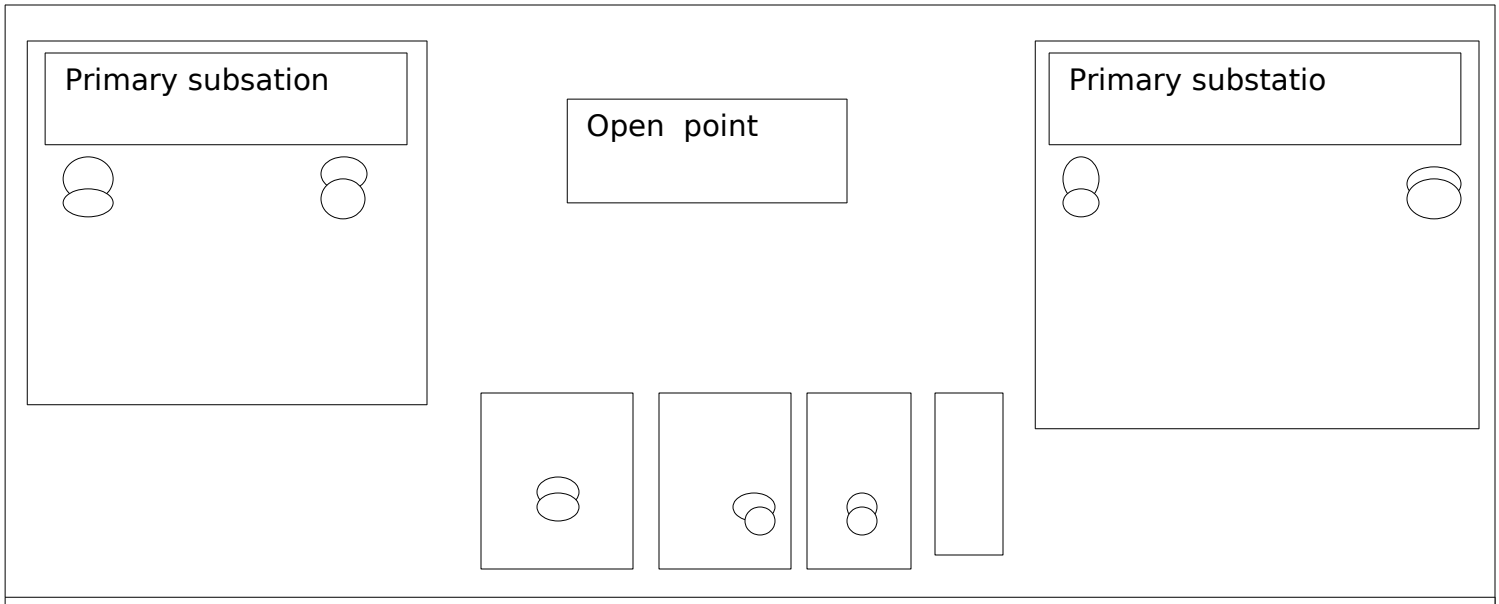
Solution recommmander architecture building

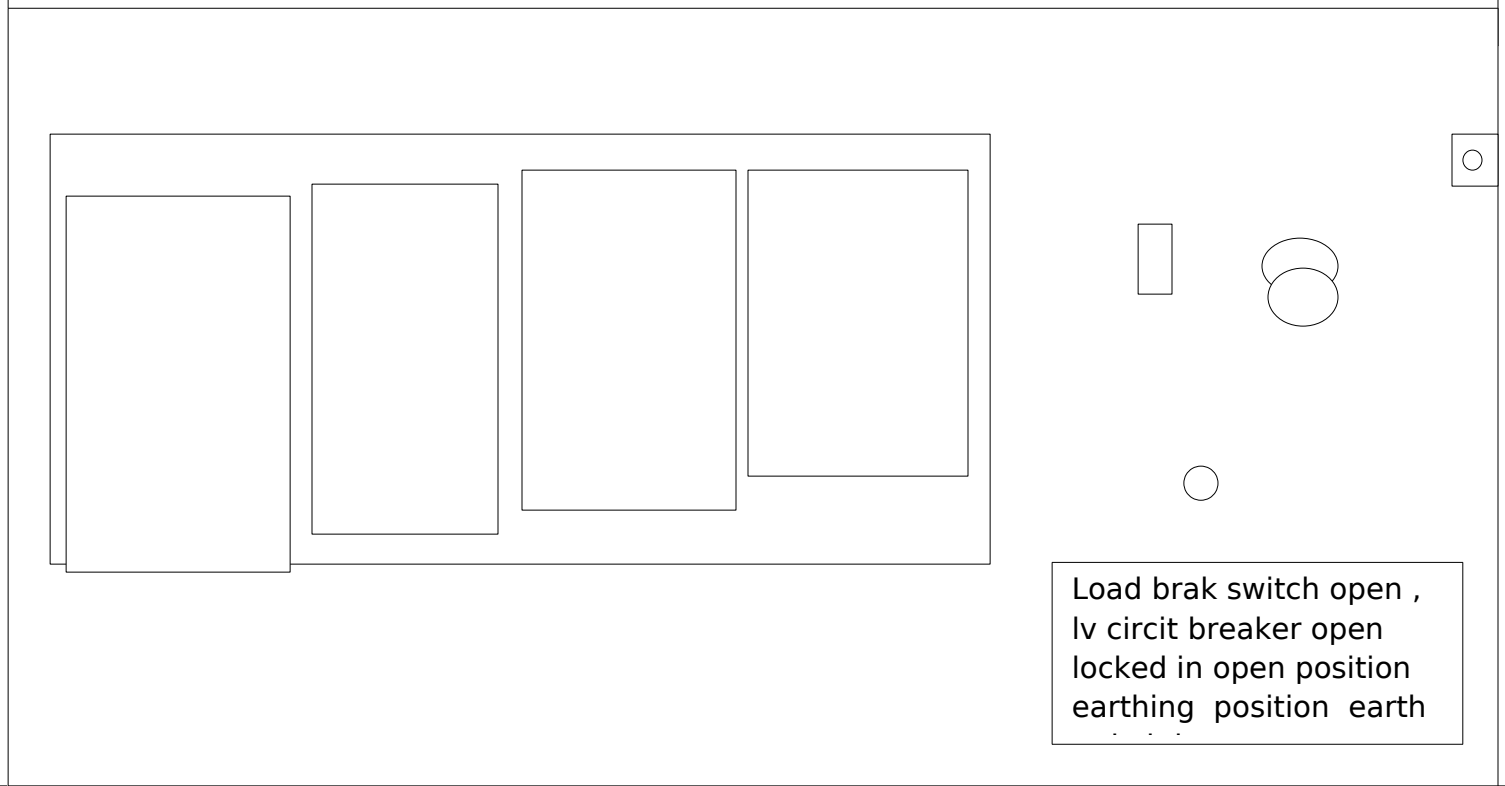


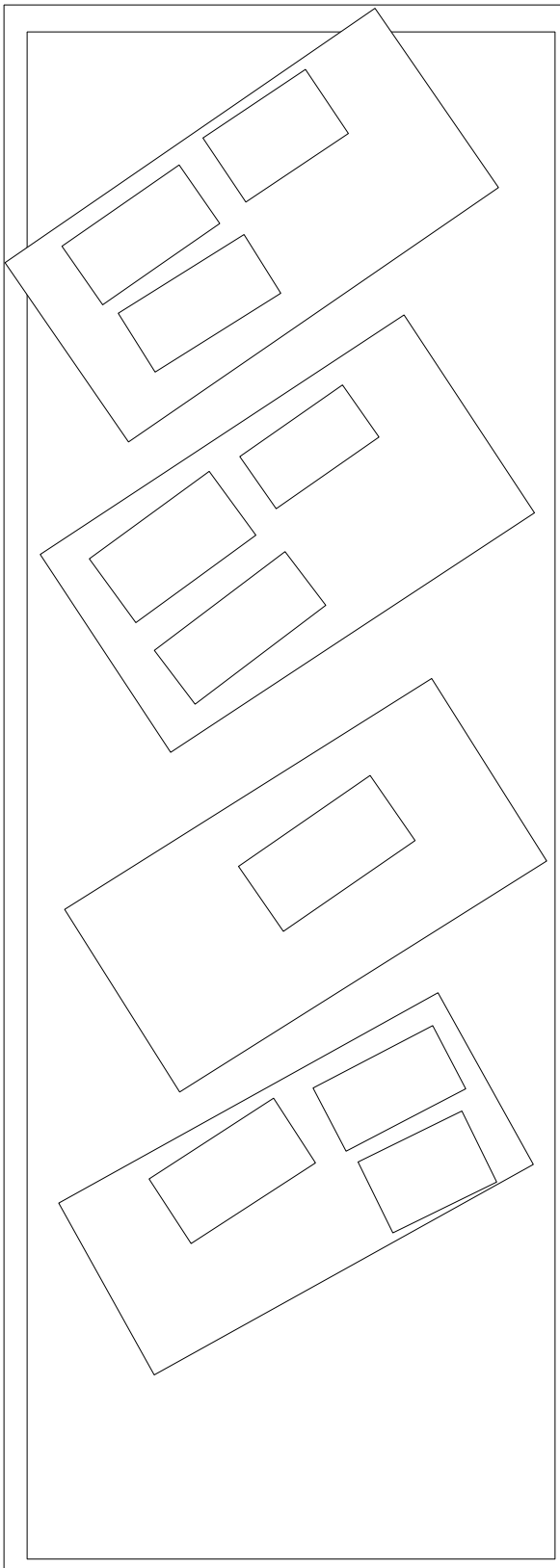


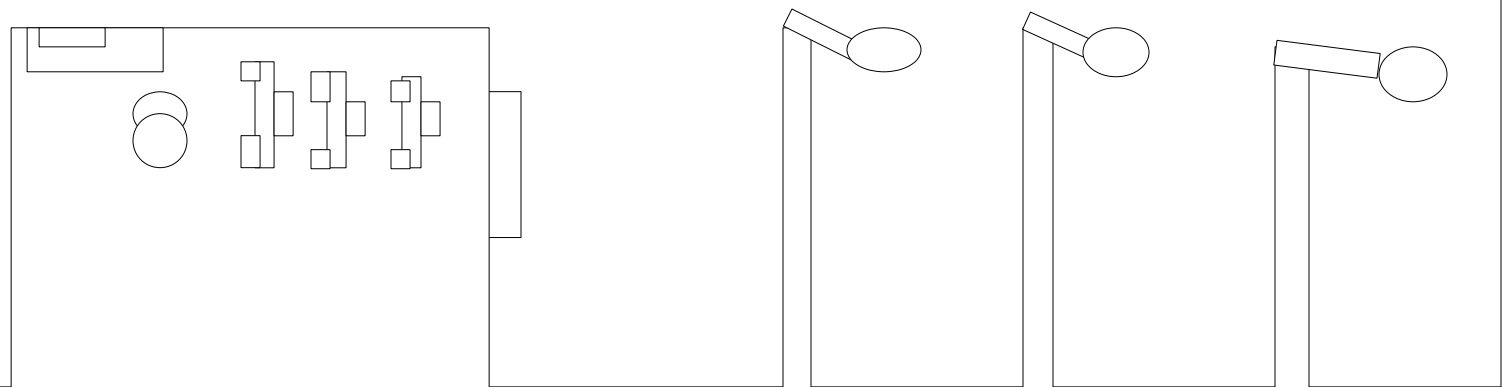


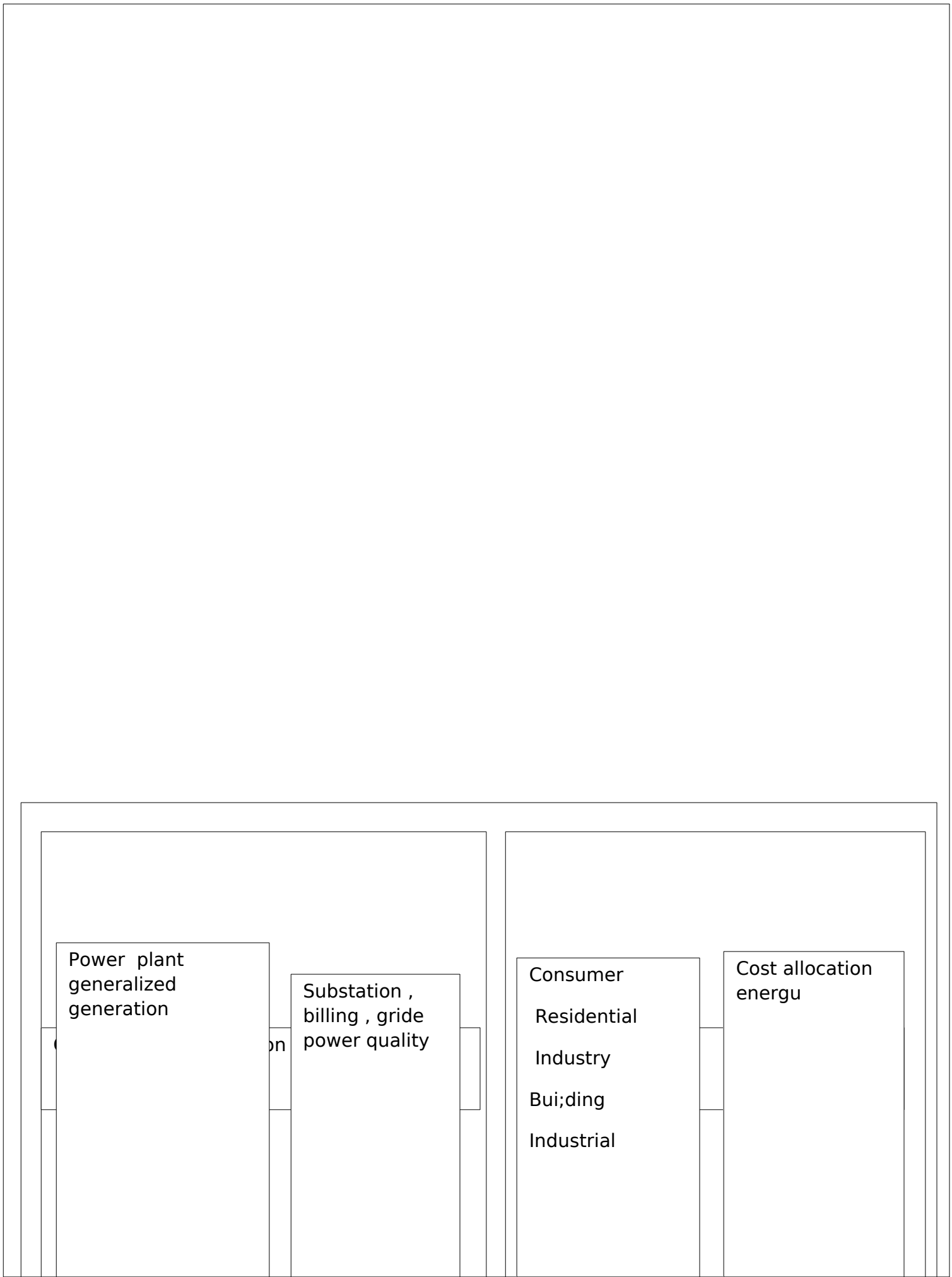
Disconnected mean energized

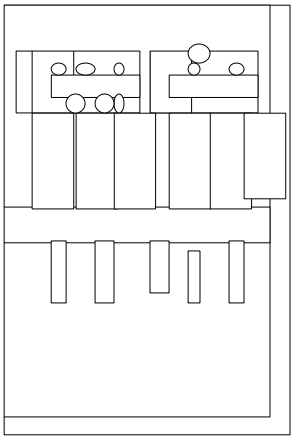


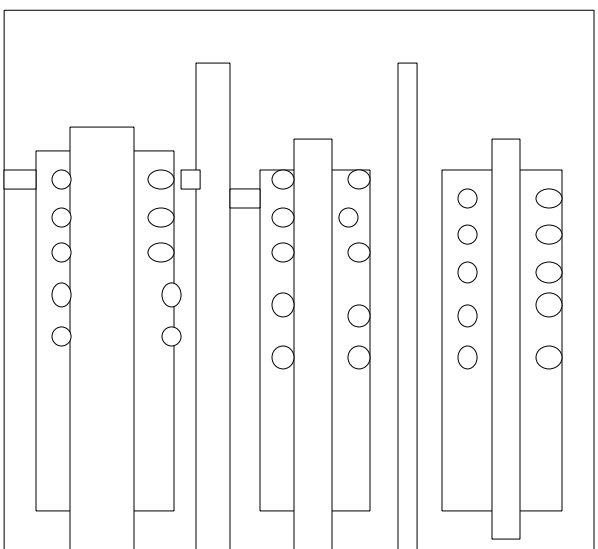


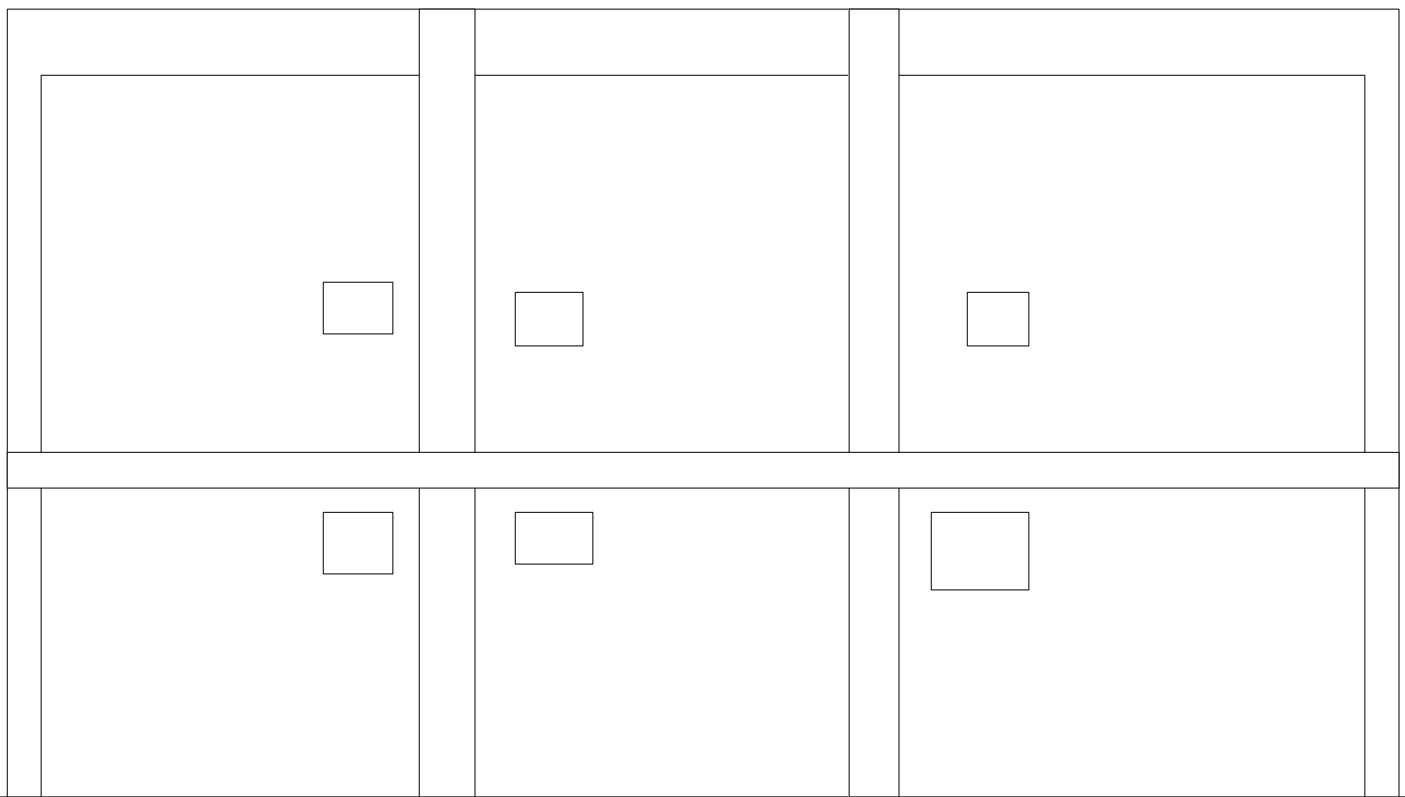


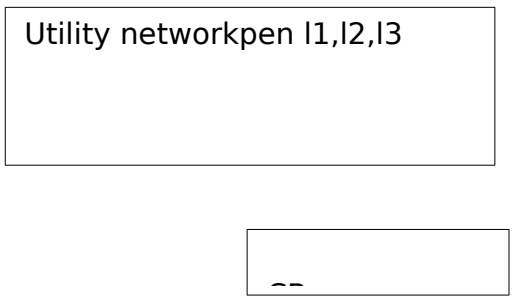


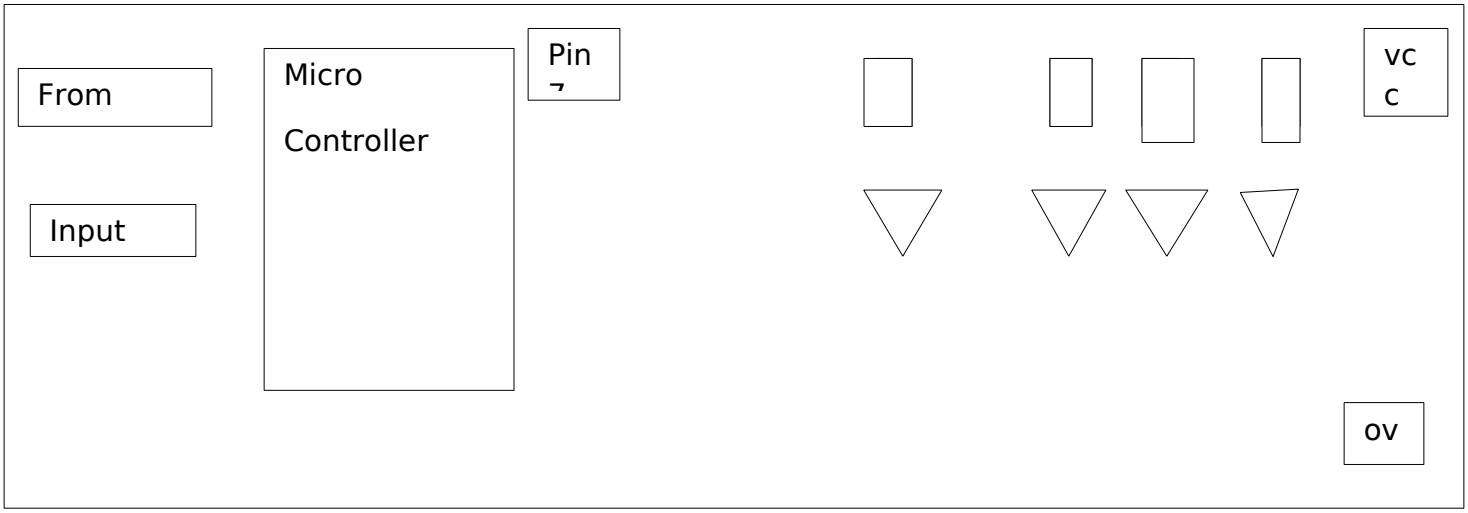

Power plant generalized generation
Substation , billing , gride power quality
Consumer
Residential
Industry
Bui;ding
Industrial
Cost allocation energu



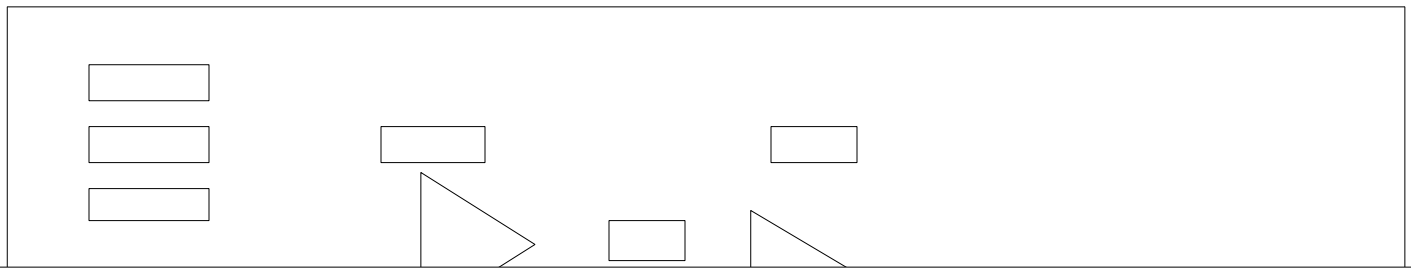


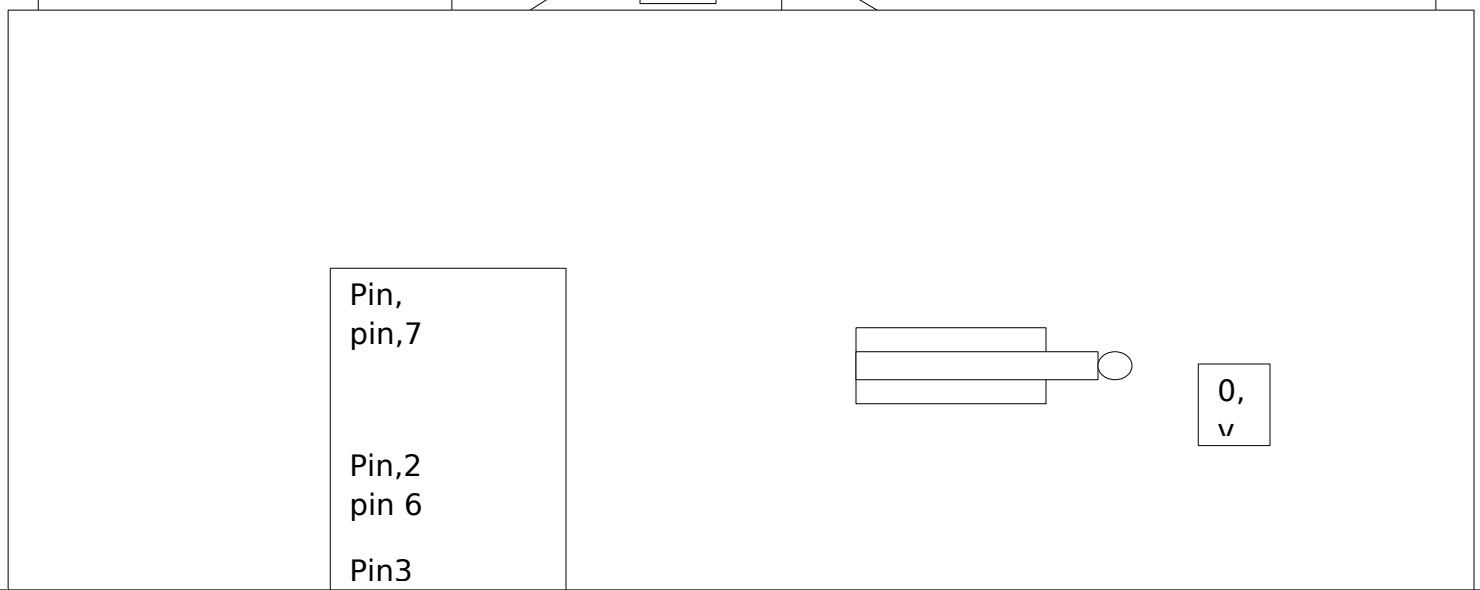


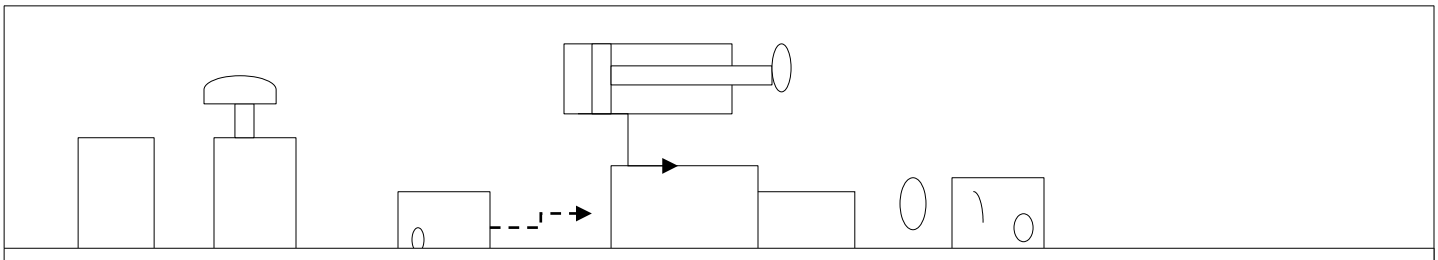

Utility networkpen l1,l2,l3

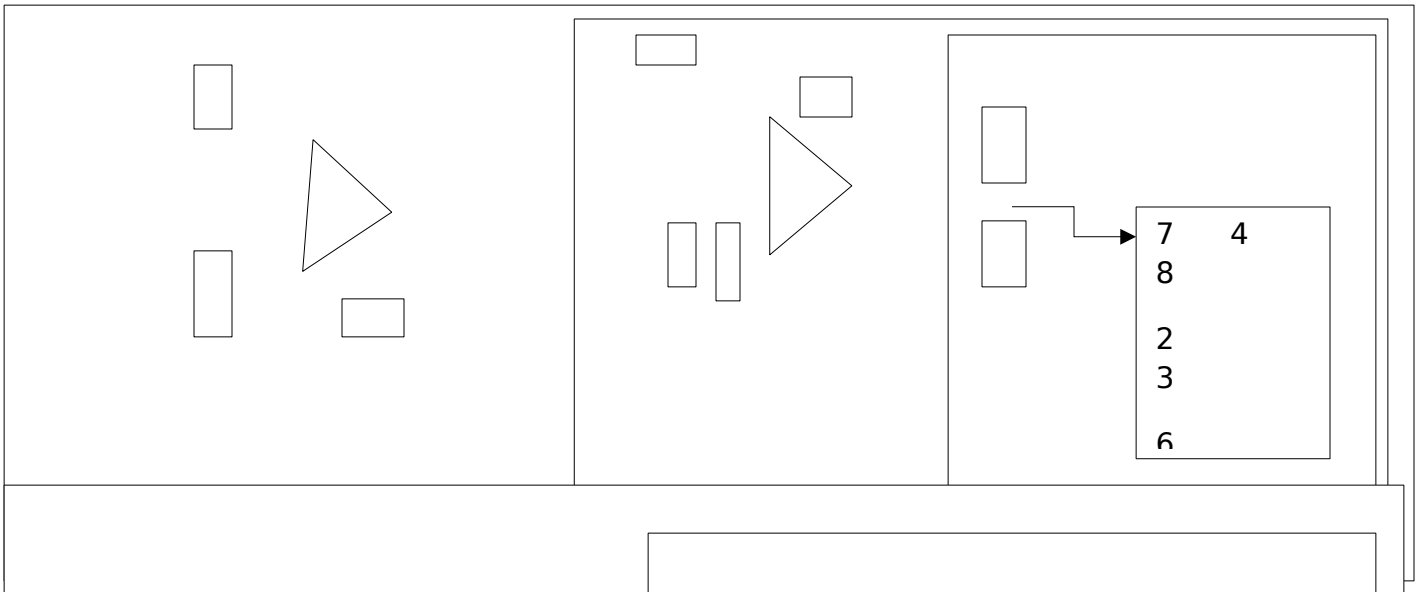

From
Input
Micro
Controller
Pin
vc
c
ov

2.4 kn ,,m-1




Pin,
pin,7
Pin,2
pin 6
Pin3
0,
v




7 4
8
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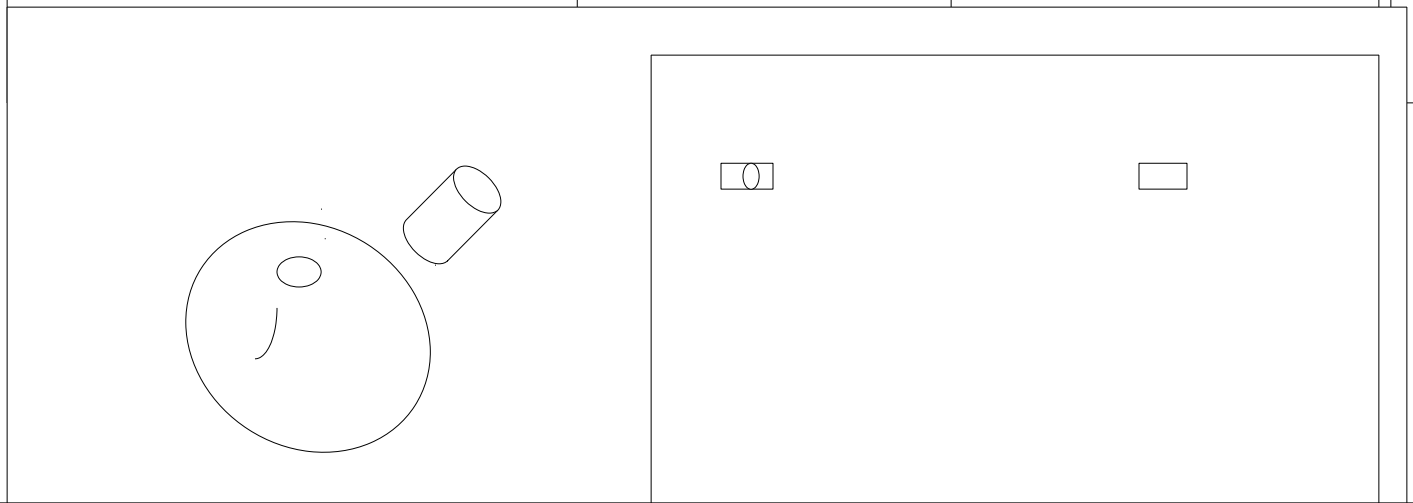
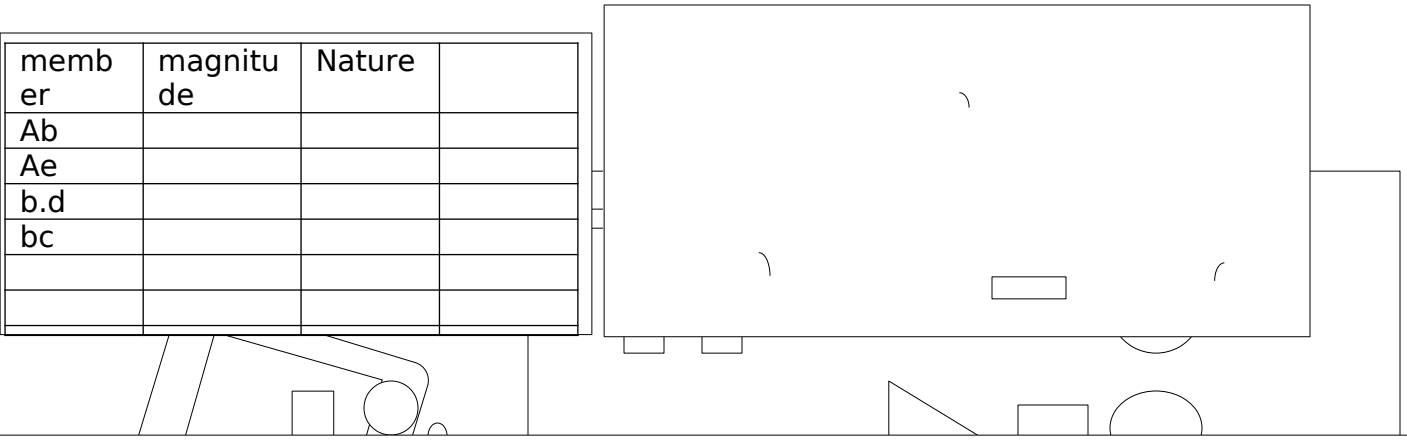
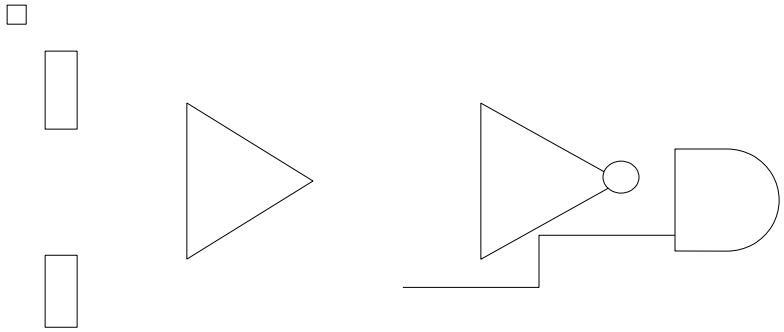


member	magnitude	Nature	
Ab			
Ae			
b.d			
bc			





5,0v

R1=15 ohm

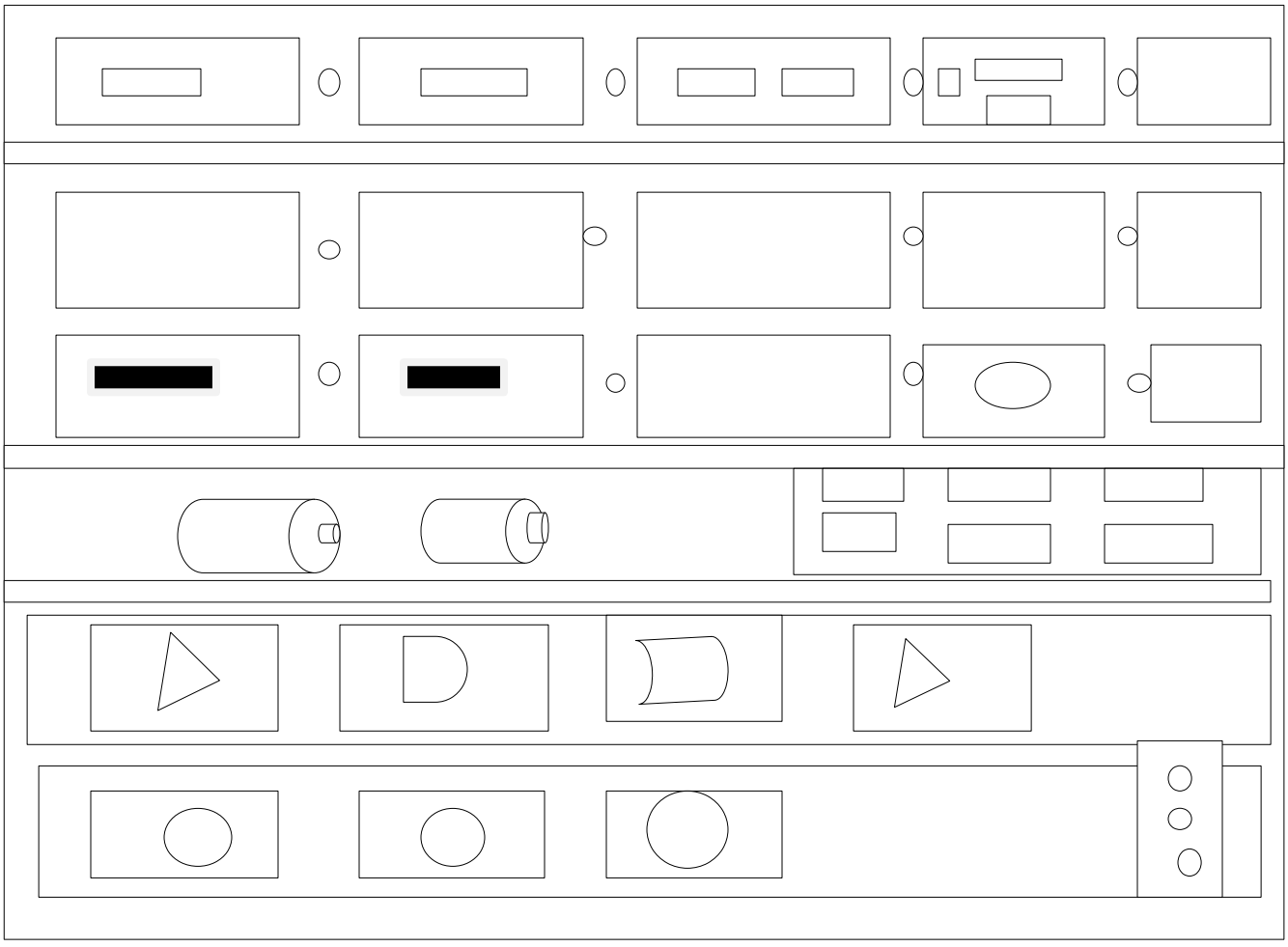
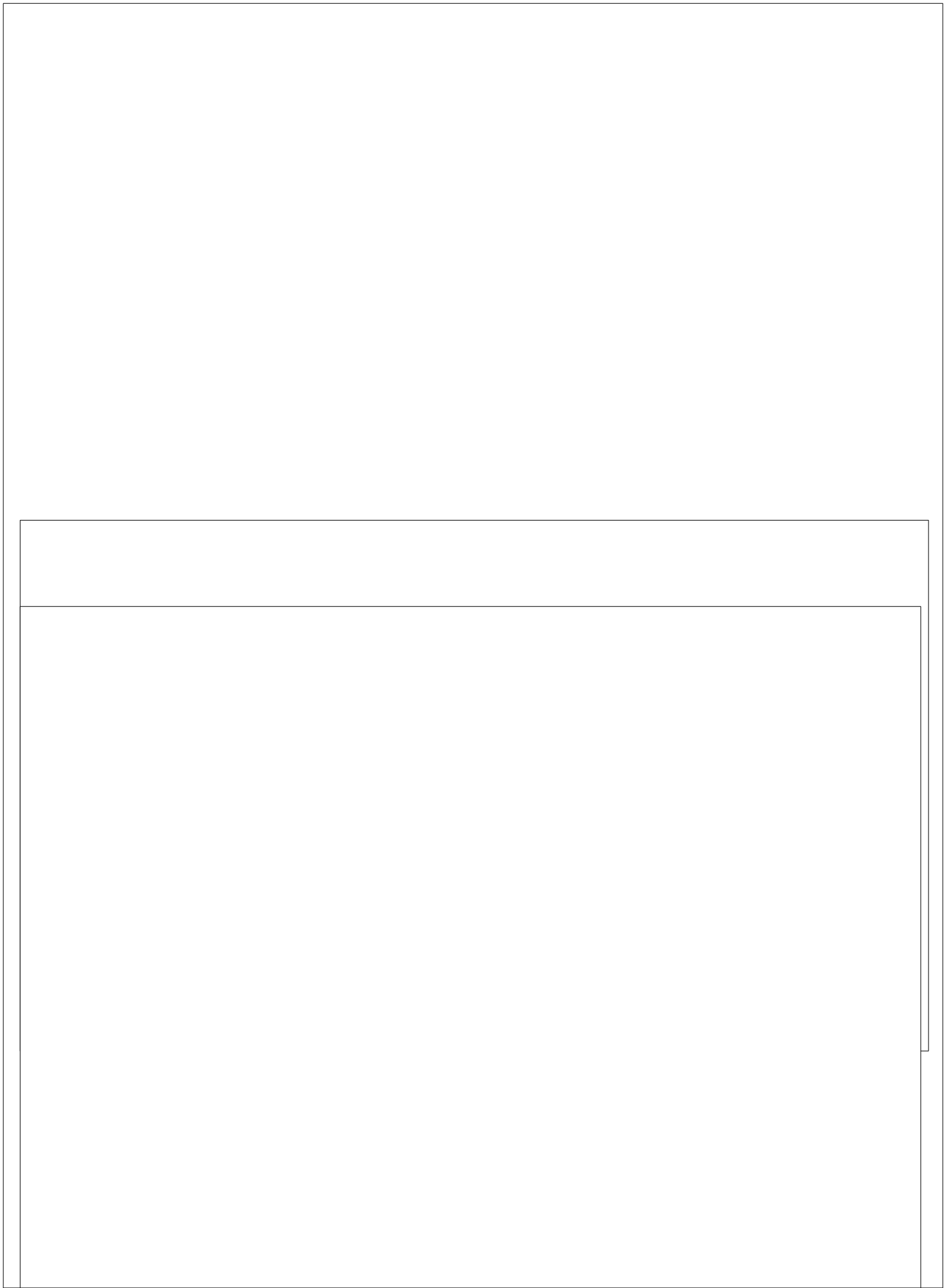
R2

1.0

R3 , 15 ohm

5.0v

5,ov

R4,220ohm,

R5,,,r6,r7,,220 ohm